Sequence Protocol

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S. C. Spirit

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Trp	Leu	Ile 35	Gln	Thr	Lys	Arg	Arg 40	Tyr	Phe	Ser	Ser	Pro 45	Lys	Gln	Met
Ser	Met 50	Thr	His	Trp	Pro	Arg 55	Thr	Ala	Trp	Leu	Thr 60	Gly	Cys	Ser	Val
Thr 65	Leu	Phe	Leu	Phe	Pro 70	Ser	Gln	Tyr	Val	Asp 75	Val	Ala	Ser	Leu	Gly 80
Leu	Val	Pro	Gln	Leu 85	Thr	Gly	Gly	Thr	Leu 90	Tyr	Lys	Tyr	Asn	Asn 95	Phe
Gln	Met	His	Leu 100		Arg	Gln	Gln	Phe 105	Leu	Asn	Asp	Leu	Arg 110	Asn	Asp
Ile	Glu	Lys 115	Lys	Ile	Gly	Phe	Asp 120	Ala	Ile	Met	Arg	Val 125	Arg	Thr	Ser
Thr	Gly 130	Phe	Arg	, Ala	Thr	Asp 135	Phe	Phe	Gly	Gly	Ile 140		Met	Asn	Asn
Thr 145	Thr		val	. Glu	Met 150		Ala	Ile	Asp	Cys 155	_	Lys	Ala	Val	Thr 160
Val		ı Phe	e Lys	в Нія 165	_) Asp	. Lys	Leu	Ser 170		ı Asp	Ser	: Gly	Ala 175	

Ile	Gln	Cys	Ala 180	Val	Leu	Tyr	Thr	Thr 185	Ile	Ser	Gly	Gln	Arg 190	Arg	Leu ·
Arg	Ile	His 195	Asn	Leu	Gly	Leu	Asn 200	Cys	Ser	Ser	Gln	Leu 205	Ala	Asp	Leu
Tyr	Lys 210	Ser	Cys	Glu	Thr	Asp 215	Ala	Leu	Ile	Asn	Phe 220	Phe	Ala	Lys	Ser
Ala 225	Phe	Lys	Ala	Val	Leu 230	His	Gln	Pro	Leu	Lys 235	Val	Ile	Arg	Glu	Ile 240
Leu	Val	Asn	Gln	Thr 245	Ala	His	Met	Leu	Ala 250	Cys	Tyr	Arg	Lys	Asn 255	Cys
Ala	Ser	Pro	Ser 260	Ala	Ala	Ser	Gln	Leu 265	Ile	Leu	Pro	Asp	Ser 270	Met	Lys
Val	Leu	Pro 275	Val	Tyr	Met	Asn	Cys 280	Leu	Leu	Lys	Asn	Cys 285	Val	Leu	Leu
Ser	Arg 290	Pro	Glu	Ile	Ser	Thr 295	Asp	Glu	Arg	Ala	Tyr 300	Gln	Arg	Gln	Leu
Val 305	Met	Thr	Met	Gly	Val 310	Ala	Asp	Ser	Gln	Leu 315	Phe	Phe	Tyr	Pro	Gln 320
Leu	Leu	Pro	Ile	His 325	Thr	Leu	Asp	Val	Lys 330	Ser	Thr	Met	Leu	Pro 335	Ala
Ala	Val	Arg	Cys		Glu	Ser	Arg	Leu 345	Ser	Glu	Glu	Gly	Ile 350	Phe	Leu
Leu	Ala	Asn 355	_	Leu	His	Met	Phe 360	Leu	Trp	Leu	Gly	Val 365		Ser	,Pro
Pro	Glu 370		ı Ile	e Gln	Gly	Ile 375		Asn	Val	Pro	Ser 380		. Ala	His	Ile
Asr 385		c Ası) Met	: Thr	Leu 390		Pro	Glu	Val	. Gly 395		n Pro	туг	Ser	Gln 400
Glr	ı Lei	u Arg	g Met	t Ile 405	e Met	Gly	/ Ile	e Ile	Glr 410	n Glr	ı Lys	s Arg	g Pro	Tyr 415	
Met	_ Ly	s Le	u Th:		e Val	. Lys	₃ Glr	1 Arg	•	ı Glı	n Pro	o Gli	1 Met		Phe
Arg	g Gl	n Ph 43		u Va	l Glu	ı Ası	p Lys		/ Le	u Ty:	r Gl	y Gl	y Se: 5	r Sei	r Tyr
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<213> homo sapiens

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Val	Lys	Ser 35	Asn	Leu	Ala	Gln	Pro 40	Gln	Met	Met	Gly	Val 45	Thr	Asp	Val
Gly	Glu 50	Val	Phe	Val	Pro	Leu 55	Leu	Asp	Gly	Phe	Leu 60	Val	Asn	Tyr	Gln
Glu 65	Ser	Gln	Ser	Val	Ile 70	His	Asn	Leu	Leu	Asp 75	Gln	Ile	Pro	Asp	Met 80
Phe	Ala	Asp	Ser	Asn 85	Glu	Asn	Glu	Thr	Val 90	Phe	Ala	Pro	Val	Ile 95	Gln
Ala	Gly	Met	Glu 100	Ala	Leu	Lys	Ala	Ala 105	Asp	Суѕ	Pro	Gly	Lys 110	Leu	Phe
Ile	Phe	His 115	Ser	Ser	Leu	Pro	Thr 120	Ala	Glu	Ala	Pro	Gly 125	Lys	Leu	Lys
Asn	Arg 130	Asp	Asp	Lys	Lys	Leu 135	Val	Asn	Thr	Asp	Lys 140	Glu	Lys	Ile	Leu
Phe 145	Gln	Pro	Gln	Thr	Asn 150	Val	Tyr	Asp	Ser	Leu 155	Ala	Lys	Asp	Cys	Val 160
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Val	His	Gln 35	Asp	Ser	Thr	Lys	Glu 40	Ile	Ser	Gly	Ser	Glu 45	Thr	Cys	Ala
Gly	Thr 50	Asn	Pro	His	Asn	Ser 55	Ile	Lys	Ala	Tyr	Phe 60	Leu	Phe	Asn	Ile
Ile 65	Ser	Glu	Val	Val	Gln 70	Lys	Leu	Lėu	Ser	Ile 75	Gln	Val	His	Leu	Glu 80
Ile	Val	Val	Phe	Val 85	Lys	Gly	Ser	Ser	Ser 90	Glu	Leu	Arg	Asn	Gln 95	Pro
Gln	Arg	Gly	His 100	Val	His	Ile	Leu	Thr 105	Arg	Lys	Glu	Glu	Glu 110	Cys	His
Arq	Ala	Ala	G1	a 1	Pro		Ser	Pro	_	Pro	Met	Ser	His	Arg	His

Leu Phe Gly Ala Gly Lys Val Ser Ser Leu Cys Leu Tyr 130 135

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Ser	Ala 290	Gly	Asn	Asp	Ile	Gly 295	Pro	Tyr	Gly	Glu	Arg 300	Asp	Asp	Gln	Gln ·
Val 305	Phe	Ile	Gln	Lys	Val 310	Val	Pro	Ser	Ala	Ser 315	Gln	Leu	Phe	Val	Arg 320
Leu	Ser	Ser	Thr	Gly 325	Gln	Arg	Val	Cys	Ser 330	Val	Arg	Ser	Val	Asp 335	Gly
Ser	Pro	Thr	Thr 340	Ala	Phe	Thr	Val	Leu 345	Glu	Cys	Glu	Gly	Ser 350	Arg	Arg
Leu	Gly	Ser 355	Arg	Pro	Arg	Arg	Tyr 360	Leu	Leu	Thr	Gly	Gln 365	Ala	Asn	Gly
Ser	Leu 370	Ala	Met	Trp	Asp	Leu 375	Thr	Thr	Ala	Met	Asp 380	Gly	Leu	Gly	Gln
Ala 385	Pro	Ala	Gly	Gly	Leu 390	Thr	Glu	Gln	Glu	Leu 395	Met	Glu	Gln	Leu	Glu 400
His	Cys	Glu	Leu	Ala 405	Pro	Pro	Ala	Pro	Ser 410	Ala	Pro	Ser	Trp	Gly 415	Cys
Leu	Pro	Ser	Pro 420	Ser	Pro	Arg	Ile	Ser 425	Leu	Thr	Ser	Leu	His 430	Ser	Ala
Ser	Ser	Asn 435	Thr	Ser	Leu	Ser	Gly 440	His	Arg	Gly	Ser	Pro 445	Ser	Pro	Pro
Gln	Ala 450	Glu	Ala	Arg	Arg	Arg 455	Gly	Gly	Gly	Ser	Phe 460	Val	Glu	Arg	Суѕ
Gln 465	Glu	Leu	Val	Arg	Ser 470	Gly	Pro	Asp	Leu	Arg 475	Arg	Pro	Pro	Thr	Pro 480
Ala	Pro	Trp	Pro	Ser 485	Ser	Gly	Leu	Gly	Thr 490	Pro	Leu	Thr	Pro	Pro 495	Lys
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Val	Gly	Gly 35	Lys	Arg	Phe	Ser	Thr 40	Ser	Arg	Gln	Thr	Leu 45	Thr	Trp	Ile
Pro	Asp 50	Ser	Phe	Phe	Ser	Ser 55	Leu	Leu	Ser	Gly	Arg 60	Ile	Ser	Thr	Leu
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Val	His	Gly	Ser 100	Ser	Leu	Leu	His	Glu 105	Ala	Gln	Phe	Tyr	Gly 110	Leu	Thr
Pro	Leu	Val 115	Arg	Arg	Leu	Gln	Leu 120	Arg	Glu	Glu	Leu	Asp 125	Arg	Ser	Ser
Cys	Gly 130	Asn	Val	Leu	Phe	Asn 135	Gly	Tyr	Leu	Pro	Pro 140	Pro	Val	Phe	Pro
Val 145	Lys	Arg	Arg	Asn	Arg 150	His	Ser	Leu	Val	Gly 155	Pro	Gln	Gln	Leu	Gly 160
Gly	Arg	Pro	Ala	Pro 165	Val	Arg	Arg	Ser	Asn 170	Thr	Met	Pro	Pro	Asn 175	Leu
Gly	Asn	Ala	Gly 180	Leu	Leu	Gly	Arg	Met 185	Leu	Asp	Glu	Lys	Thr 190	Pro	Pro
Ser	Pro	Ser 195	Gly	Gln	Pro	Glu	Glu 200	Pro	Gly	Met	Val	Arg 205	Leu	Val	Cys
Gly	His 210	His	Asn	Trp	Ile	Ala 215	Val	Ala	Tyr	Thr	Gln 220	Phe	Leu	Val	Cys
Tyr 225	Arg	Leu	Lys	Glu	Ala 230	Ser	Gly	Gly	Gln	Leu 235	Val	Phe	Ser	Ser	Pro 240
Arg	Leu	Asp	Trp	Pro 245	Met	Arg	Thr	Thr	Gly 250	Ala	Ser	Gln	Pro	Gly 255	Cys
Met	Val	Gly	Leu 260	Trp	Val	Asn	Met	Thr 265	Arg	Trp	Trp	Gln	Gln 270	Pro	Pro
Ala	Ala	Arg 275	Ser	Суз	Tyr	Gly	Leu 280	Cys	Arg	Arg	Lys	Ala 285	Val	Ala	Pro
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Gln	Lys	Glu	Val 20	Ser	Leu	Ser	Phe	Ile 25	Leu	Gly	Gly	Val	Arg 30	Gly	Val
Pro	Arg	Pro 35	Leu	Glu	Gly	His	Gly 40	Ala	Gly	Val	Gly	Gly 45	Arg	Arg	Arg
Ser	Gly 50	Pro	Leu	Arg	Thr	Ser 55	Ser	Trp	Gln	Arg	Ser 60	Thr	Lys	Leu	Pro
Pro	Pro	Arg	Arg	Arg	Ala	Ser	Ala	Cys	Gly	Gly	Leu	Gly	Leu	Pro	Arg

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Trp	Pro	Asp	Lys	Glu 85	Val	Leu	Leu	Glu	Ala 90	Glu	Trp	Arg	Leu	Val 95	Arg
Glu	Met	Arg	Gly 100	Glu	Gly	Leu	Gly	Arg 105	Gln	Pro	His	Glu	Gly 110	Ala	Glu
Gly	Ala	Gly 115	Gly	Ala	Ser	Ser	Gln 120	Cys	Ser	Ser	Cys	Ser 125	Ile	Ser	Ser
Cys	Ser 130	Val	Arg	Pro	Pro	Ala 135	Gly	Ala	Trp	Pro	Arg 140	Pro	Ser	Met	Ala
Val 145	Val	Arg	Ser	His	Met 150	Ala	Lys	Leu	Pro	Leu 155	Ala	Trp	Pro	Val	Ser 160
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Lys	Lys	Val 35	Glu	Lys	Val	Asp	Lys 40	Asp	Ala	Glu	Leu	Val 45	Ala	Gln	Trp
Asn	Tyr 50	Cys	Thr	Leu	Ser	Gln 55	Glu	Ile	Leu	Arg	Arg 60	Pro	Ile	Val	Ala
Cys 65	Glu	Leu	Gly	Arg	Leu 70	Tyr	Asn	Lys	Asp	Ala 75	Val	Ile	Glu	Phe	Leu 80
Leu	Asp	Lys	Ser	Ala 85	Glu	Lys	'Ala	Leu	Gly 90	Lys	Ala	Ala	Ser	His 95	Ile
Lys	Ser	Ile	Lys 100	Asn	Val	Thr	Glu	Leu 105		Leu	Ser	Asp	Asn 110		Ala
Trp	Glu	Gly 115	Asp	Lys	Gly	Asn	Thr 120	_	Gly	Asp	Lys	His 125	_	Asp	Leu
Gln	Arg	Ala	Arg	Phe	Ile	Cys 135		Val	Val	Gly	Leu 140		. Met	. Asn	Gly
Arg 145		Arg	Phe	Cys	Phe 150		. Arg	l CÀa	Cys	Gly 155		. Val	. Phe	e Ser	Glu 160
Arg	g Ala	Leu	Lys	Glu 165		Lys	Ala	a Glu	1 Val		: His	s Thr	Cys	Gly 175	
Ala	a Phe	Gln	Glu 180	_	Asp	Val	. Ile	e Val		ı Asn	ı Gly	/ Thi	190		ı Asp
Va]	l Asp	val	. Leu	. Lys	Thr	Arg	g Met	: Glu	ı Glu	ı Arg	g Arg	g Lei	ı Arg	g Ala	a Asn

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Gln 225	Met	Ser	Val	Lys	Lys 230	Pro	Gln	Gly	His	Gln 235	Lys	Leu	Arg	Gln	Gly 240
Ser	Leu	Lys	Lys	Pro 245	Ala	Leu	Ile	Leu	Glu 250	Arg	Arg	Lys	Pro	Thr 255	Trp
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Lys	Pro	Lys 35	Ala	Ala	Glu	Ser	Val 40	Ser	Lys	Pro	Asp	Val 45	Ser	Glu	Glu
Ala	Pro 50	Gly	Pro	Ser	Lys	Val 55	Lys	Thr	Gly	Lys	Pro 60	Glu	Glu	Ala	Ser
Leu 65	Asp	Ser	Arg	Glu	Lys 70	Lys	Thr	Asn	Leu	Ala 75	Pro	Lys	Ser	Thr	Ala 80
Met	Asn	Glu	Ser	Ser 85	Ser	Gly	Lys	Ala	Gly 90	Lys	Pro	Pro	Cys	Gly 95	Ala
Thr	Lys	Arg	Ser 100	Ile	Ala	Asp	Ser	Glu 105	Glu	Ser	Glu	Ala	Tyr 110	Lys	Ser
Leu	Phe	Thr 115	Thr	His	Ser	Ser	Ala 120	Lys	Arg	Ser	Lys	Glu 125	Glu	Ser	Ala
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Phe	Pro	Ile	Arg 20	Ser	Gln	Pro	Ser	Leu 25	Leu	His	Pro	Cys	Leu 30	Gln	His
Val	His	Ile 35	Leu	Leu	Gly	Ala	Ile 40	Glu	His	Asp	Asp	Ile 45	Ile	Leu	Leu

Glu	Gly 50	Ser	Pro	Thr	Arg	Val 55	Ala	Asn	Phe	Arg	Phe 60	Tyr	Leu	Phe	Gln ·
Gly 65	Ser	Leu	Arg	Lys	His 70	Thr	Ala	Ala	Ala	Pro 75	Lys	Glu	Ala	Glu	Pro 80
Val	Ser	Ala	Val	His 85	Leu	Gln	Ala	His	Asn 90	Gly	Ala	Asp	Glu	Thr 95	Arg
Pro	Leu	Glu	Val 100	Ile	Val	Leu	Val	Thr 105	Phe	Ser	Val	Ser	Phe 110	Ile	Pro
Phe	Pro	Gly 115	Arg	Ile	Ile	Arg	Lys 120	Leu	Gln	Leu	Cys	His 125	Ile	Leu	Asn
Ala	Phe 130	Asn	Val	Arg	Cys	Cys 135	Leu	Pro	Lys	Ser	Leu 140	Phe	Cys	Arg	Phe
Val 145	Gln	Glu	Lys	Phe	Asn 150	Asp	Gly	Ile	Phe	Val 155	Ile	ŗŇa	Ser	Ala	Lys 160
Phe	Thr	Gly	Asn	Tyr 165	Trp	Ser	Ser								
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Glu	Phe 50	Thr	Gly	Arg	Asp	Ser 55	'Ile	Thr	Cys	Leu	Thr 60	Cys	Gln	Gly	Thr
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His	Ser	Asp	Gln	Arg 85	Leu	Arg	Pro	Gln	Arg 90	Thr	Lys	Gln	Tyr	Val 95	Leu
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Leu	Phe	Pro 115	His	Ser	Val	Leu	Val 120	Asp	Asp	Asp	Gly	Ile 125	Lys	Val	Val
Lys	Val 130		Phe	Asn	Lys	Gln 135	_	Ser	Leu	Val	Ile 140	Leu	Thr	Ile	Met
Ala 145		Leu	Lys	Ile	Arg 150	Asn	Ser	Asn	Phe	Tyr 155	Thr	Val	Ala	Val	Thr 160
Ser	Leu	Ser	Ser	Gln	Ile	Gln	Tyr	Met	Asn	Thr	Val	Val	Asn	Phe	Thr

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Ser	Val 210	Lys	Ile	Ser	Tyr	Ile 215	Gly	Leu	Met	Thr	Gln 220	Ser	Ser	Leu	Glu
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Gly	Lys	Ile 35	His	His	Cys	Val	His 40	Val	Leu	Asn	Leu	Ala 45	Gly	Gln	Ala
Gly	His 50	Cys	His	Arg	Val	Glu 55	Val	Gly	Val	Pro	Asp 60	Phe	Gln	Gly	Gly
His 65	Asp	Gly	Glu	Asn	Tyr 70	Lys	Gly	Val	Leu	Leu 75	Ile	Lys	Cys	Asp	Phe 80
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Leu	Ile	Thr 35	Val	Trp	Asp	Gln	Ser 40	His	Gln	Leu	Ile	Tyr 45	Leu	Leu	Cys
Trp	Asn 50	Val	Ala	Cys	Pro	Leu 55	Ala	Arg	Glu	Thr	Gly 60	Asp	Ala	Ile	Ser
Pro 65	Gly	Glu	Phe	His	Ile 70	Trp	Glu	Leu	Ser	Asn 75	Gly	Phe	Phe	Leu	Leu 80
Ser	Phe	Ser	Gln	Gln 85	Thr	Val	Pro	Val	Ile 90	Phe	Leu	Leu	Ser	Pro 95	Ala

Gly	Gly	Gly	Ala 100	Ser	Ser	Ser	Gly	Met 105	Leu	Arg	Pro	His	Gly 110	Arg	Asp
Met	Pro	Leu 115	Val	Ser	Cys	Pro	Ala 120	Ser	Ser	Val	Gly	Gly 125	Ala	Ala	Arg
Thr	Gln 130	Arg	Ala	Gly											
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Arg	Pro	Gly 35	Gln	Ser	Thr	Leu	Ser 40	Arg	Ile	Glu	Ala	Val 45	Gln	Pro	Gln
Leu	Pro 50	Arg	Pro	Ser	Gly	Leu 55	Pro	Ser	Leu	Trp	Gly 60	Trp	Leu	Pro	Trp
Leu 65	Leu	Gly	Thr	Arg	Pro 70	Gln	Arg	His	Pro	Glu 75	Ile	Pro	Pro	Glu	Thr 80
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Val	Lys	Phe	Leu 20	Asp	Thr	Asp	Thr	Ile 25	Cys	Tyr	Arg	Val	Glu 30	Glu	Pro
Glu	Thr	Leu 35	Val	Glu	Leu	Gln	Arg 40	Asn	Glu	Trp	Asp	Pro 45	Ile	Ile	Glu
Trp	Ala 50	Glu	Lys	Arg	Tyr	Gly 55	Val	Glu	Ile	Ser	Ser 60	Ser	Thr	Ser	Ile
Met 65	Gly	Pro	Ser	Ile	Pro 70	Ala	Lys	Thr	Arg	Glu 75	Val	Leu	Val	Ser	His 80
Leu	Ala	Ser	Tyr	Asn 85	Thr	Trp	Ala	Leu	Gln 90	Gly	Ile	Glu	Phe	Val 95	Ala
Ala															

Leu	Thr	Val 115	Glu	Gln	Ala	Val	Leu 120	Leu	Ser	Arg	Leu	Glu 125	Glu	Glu	Tyr .
Gln	Ile 130	Gln	Lys	Trp	Gly	Asn 135	Ile	Glu	Trp	Ala	His 140	Asp	Tyr	Glu	Leu
Gln 145	Glu	Leu	Arg	Ala	Arg 150	Thr	Ala	Ala	Gly	Thr 155	Leu	Phe	Ile	His	Leu 160
Cys	Ser	Glu	Ser	Thr 165	Thr	Val	Lys	His	Lys 170	Leu	Leu	Lys	Glu		
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Leu	His	Gly	Cys 20	Pro	Asp	Gln	Leu	Ile 25	Leu	Val	Ser	Leu	30	Trp	Val
Val	Gln	Ser 35	Arg	Val	Ala	Gln	Cys 40	Gly	Gln	Val	His	Gly 45	Val	Val	Leu
Asp	Gly 50	Ile	Leu	Leu	Gly	Ile 55	Pro	Leu	Ser	Thr	Leu 60	Cys	Thr	Cys	Gln
Gly 65	Leu														
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Thr	Ile	Ile	Gln 20		Asn	Glu	Leu	Arg 25	Lys	Ala	Lys	Lys	Leu 30	Glu	Glu
Leu	Met	Gln 35		Leu	Asp	Val	Glu 40	Ala	Asp	Glu	Glu	Thr 45		Glu	Leu
Glu	Val		ı Val	Glu	Arg	Leu 55		His	Glu	Gln	Glu 60		. Glu	Ser	Arg
Arg 65		Val	. Val	. Arg	Leu 70		Arg	Pro	Phe	Gln 75		Ala	. Glu	Glu	Ser 80
Val	Thr	Lev	ı Glu	ı Phe 85		Lys	Glu	Asn	Arg		Cys	Glr	ı Glu	Gln 95	
Val	. Ser	Pro	Lys 100		Asp	Asp	Gln	Cys 105		, Asn	Ser	: Sei	s Ser 110		Pro
Phe	e Lev	ı Sei	r Pro	o Asr	ı Cys	Pro) Asn	Glr.	ı Glu	ı Gly	Asn	ı Ası	, Ile	e Ser	Ala

115 120 125

Ala Leu Ala Thr 130

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<211> 67 <212> PRT

<213> homo sapiens

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Ser Arg Pro Pro Pro Gln Ala Pro Lys Ser Leu His Arg Leu Leu His 35

Leu Val Val Ala Ser Thr Pro Pro Thr Ser Trp Pro Phe Gly Ala His 50 55

Phe Ala Val

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Ser Cys Ser Asn Leu Ser Thr Ser Thr Ser Ser Ser Lys Val Ser Ser 20

Ser Ala Ser Thr Ser Ser Cys Cys Ile Asn Ser Ser Asn Phe Leu Ala

Phe Arg Ser Ser Phe Cys Cys Met Ile Val Gln Arg Cys Ser Val Ser 50 60

Cys Ser Phe Ile Ser Val Ser Arg His Glu
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Arg Pro Tyr Ser Glu Val Phe Ser Val Ala Leu Leu Glu Arg Gly Ser 20 25 30

Ser Cys Ile Leu Arg Ile Phe Cys Ile Ser Ala Pro Phe Ser Ser Arg

45 40 35 Val Asn Gln Thr Cys His Arg Met Pro Gln Ile Gly Pro Val Pro Ser 60 55 Ser Thr Asp Glu Leu Gly Gln Pro Glu Thr Ala Ser Leu Gln Ser Ser 75 Glu Met Gln Arg Pro Ser Glu Arg Asp 85 <210> 170 <211> 74 <212> PRT <213> homo sapiens <400> 170 Arg Ile Pro Leu Lys Leu Ile Cys Thr Trp Thr Phe Pro Leu His Gly 15 10 1 Gly Asp Ile His Arg Gly Gly Phe Arg Ser Leu Thr Leu Lys Arg Leu 30 25 20 Met Ala Ala Arg Arg Glu Gly Ser Arg Leu Gly His Pro Tyr Thr Arg 40 45 35 Ala Gly Gly Thr Pro Leu Lys Glu Arg Tyr Ser Gln Asp Asn Ala Lys 60 55 His Gly Glu Asn Phe Arg Val Arg Ala Arg 70 <210> 171 <211> 89 <212> PRT <213> homo sapiens <400> 171 Ala Val Ala Phe Gln Asn Pro Ser Gln Ala His Leu Tyr Leu Asp Ser 15 5 Gly Ser Ser Pro Arg Arg Phe Pro Lys Asp Ala Arg Asp Pro Glu 30 25 20 Asp Gly Ser Glu Lys Arg Arg Glu Pro Phe Gly Ala Ser Asp Leu 45 40 Arg Ser Gln Gly Ala Pro Cys Arg Asn Pro Cys Lys Ile Phe Ser Arg 60 55 50 Ile Gln His Asn Ala Arg Thr Gly Ala Met Arg Arg Lys Leu Gln Ser 75 65 Thr Cys Ser Pro Ala His Leu Ser Pro 85 <210> 172 <211> 100 <212> PRT <213> homo sapiens

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Tyr	Phe	His	His 180	Phe	Thr	Leu	Ser	Leu 185	Cys	Gly	Asn	Gln	Gly 190	Arg	Lys
Met	Ser	Val 195	Cys	Thr	Asp	Asn	Val 200	Thr	Asp	Leu	Arg	Ile 205	Pro	Glu	Gly
Glu	Ser 210	Gly	Phe	Ser	Lys	Ser 215	Ile	Thr	Ala	Tyr	Val 220	Cys	Gln	Ala	Val
Ile 225	Ile	Pro	Pro	Glu	Val 230	Thr	Gly	Tyr	Lys	Ala 235	Gly	Val	Ser	Ser	Gln 240
Pro	Val	Ser	Leu	Ala 245	Asp	Arg	Leu	Ile	Gly 250	Val	Thr	Thr	Asp	Met 255	Thr
Leu	Asp	Gly	Ile 260	Thr	Ser	Pro	Ala	Glu 265	Leu	Phe	His	Leu	Glu 270	Ser	Leu
Gly	Ile	Pro 275	Asp	Val	Ile	Phe	Phe 280	Tyr	Arg	Ser	Asn	Asp 285	Val	Thr	Gln
Ser	Cys 290	Ser	Ser	Gly	Arg	Ser 295	Thr	Thr	Ile	Arg	Val 300	Arg	CÀa	Ser	Pro
Gln 305	Lys	Thr	Val	Pro	Gly 310	Ser	Leu	Leu	Leu	Pro 315	Gly	Thr	Cys	Ser	Asp 320
Gly	Thr	Cys	Asp	Gly 325	Cys	Asn	Phe	His	Phe 330	Leu	Trp	Glu	Ser	Ala 335	Ala
Ala	Cys	Pro	Leu 340	Cys	Ser	Val	Ala	Asp 345	Tyr	His	Ala	Ile	Val 350	Ser	Ser
Cys	Val	Ala 355	Gly	Ile	Gln	Lys	Thr 360	Thr	Tyr	Val	Trp	Arg 365	Glu	Pro	Lys
Leu	Cys 370	Ser	Gly	Gly	Ile	Ser 375	Leu	Pro	Glu	Gln	Arg 380	Val	Thr	Ile	Cys
Lys 385	Thr	Ile	Asp	Phe	Trp 390	Leu	Lys	Val	Gly	Ile 395	Ser	Ala	Gly	Thr	Cys 400
Thr	Ala	Ile	Leu	Leu 405	Thr	Val	Leu	Thr	Cys 410	Tyr	Phe	Trp	Lys	Lys 415	Asn
Gln	Lys	Leu	Glu 420	Tyr	Lys	Tyr	Ser	Lys 425	Leu	Val	Met	Asn	Ala 430	Thr	Leu
Lys	Asp	Cys 435	_	Leu	Pro	Ala	Ala 440	Asp	Ser	Cys	Ala	Ile 445	Met	Glu	Gly
Glu	Asp 450		Glu	Asp	Asp	Leu 455	Ile	Phe	Thr	Ser	Lys 460	Lys	Ser	Leu	Phe
Gly 465	Lys	Ile	Lys	Ser	Phe 470	Thr	Ser	Lys	Arg	Thr 475	Pro	Asp	Gly	Phe	Asp 480
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Pro	Lys	Ser	Pro 20	Gln	Ala	Cys	Lys	Gly 25	Ala	Met	Gln	Gly	Glu 30	Glu	Ala
Gly	Glu	Ala 35	Gly	Ser	Ala	Ser	His 40	Arg	Ser	Met	Ser	Gly 45	Pro	Pro	Glu
Asp	Val 50	Phe	Ser	Gly	Thr	Glu 55	Ser	Asn	Pro	Ser	Gly 60	Val	Leu	Leu	Glu
Val 65	Asn	Asp	Leu	Ile	Phe 70	Pro	Lys	Ser	Asp	Phe 75	Leu	Leu	Val	Lys	Met 80
Arg	Ser	Ser	Ser	Thr 85	Ser	Ser	Pro	Ser	Met 90	Met	Ala	Gln	Leu	Ser 95	Ala
Ala	Gly	Arg	Ser 100	Gln	Ser	Leu	Arg	Val 105	Ala	Phe	Ile	Thr	Ser 110	Leu	Glu
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Gly	Leu	Phe 35	Glu	Lys	Arg	Val	Pro	Ser	Glu	Pro	Val	Leu 45	Ser	Val	Gln
Glu	Lys 50	Gly	Val	Leu	Leu	Lys 55	Arg	Lys	Leu	Ser	Leu 60	Leu	Glu	Gln	Asp
Val 65	Ile	Val	Asn	Glu	Asp 70	Gly	Arg	Asn	Lys	Leu 75	Lys	Lys	Gln	Gly	Glu 80
Thr	Pro	Asn	Glu	Val 85	Cys	Met	Phe	Ser	Leu 90	Ala	Tyr	Gly	Asp	Ile 95	Pro
Glu	Glu	Leu	Ile 100	Asp	Val	Ser	Asp	Phe 105	Glu	Cys	Ser	Leu	Cys 110	Met	Arg
Leu	Phe	Phe 115	Glu	Pro	Val	Thr	Thr 120	Pro	Cys	Gly	His	Ser 125	Phe	Cys	Lys
Asn	Cys 130	Leu	Glu	Arg	Cys	Leu 135	Asp	His	Ala	Pro	Tyr 140	Cys	Pro	Leu	Cys
Lys	Glu	Ser	Leu	Lys	Glu	Tyr	Leu	Ala	Asp	Arg	Arg	Tyr	Cys	Val	Thr

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Lys	Tyr	Leu	Pro 20	Asp	Glu	Leu	Ser	Glu 25	Arg	Lys	Lys	Ile	Tyr 30	Asp	Glu
Glu	Thr	Ala 35	Glu	Leu	Ser	His	Leu 40	Thr	Lys	Asn	Val	Pro 45	Ile	Phe	Val
Cys	Thr 50	Met	Ala	Tyr	Pro	Thr 55	Val	Pro	Cys	Pro	Leu 60	His	Val	Phe	Glu
Pro 65	Arg	Tyr	Arg	Leu	Met 70	Ile	Arg	Arg	Ser	Ile 75	Gln	Thr	Gly	Thr	Lys 80
Gln	Phe	Gly	Met	Cys 85	Val	Ser	Asp	Thr	Gln 90	Asn	Ser	Phe	Ala	Asp 95	Tyr
Gly	Cys	Met	Leu 100	Gln	Ile	Arg	Asn	Val 105	His	Phe	Leu	Pro	Asp 110	Gly	Arg
Ser	Val	Val 115	Asp	Thr	Val	Gly	Gly 120	Lys	Arg	Phe	Arg	Val 125	Leu	Lys	Arg
Gly	Met 130	Lys	Asp	Gly	Tyr	Cys 135	Thr	Ala	Asp	Ile	Glu 140	Tyr	Leu	Glu	Asp
Val 145	Lys	Val	Glu	Asn	Glu 150	Asp	Glu	Ile	Lys	Asn 155	Leu	Arg	Glu	Leu	His 160
Asp	Leu	Val	Tyr	Ser 165	Gln	Ala	Cys	Ser	Trp 170	Phe	Gln	Asn	Leu	Arg 175	Asp
Arg	Phe	Arg	Ser 180	Gln	Ile	Leu	Gln	His 185	Phe	Gly	Ser	Met	Pro 190	Glu	Arg
Arg	Glu	Asn 195	Leu	Gln	Ala	Ala	Pro 200	Asn	Gly	Pro	Ala	Trp 205	Cys	Trp	Trp
Leu	Leu 210	Ala	Val	Leu	Pro	Val 215	Asp	Pro	Arg	Tyr	Gln 220	Leu	Ser	Val	Leu
Ser 225	Met	Lys	Ser	Leu	Lys 230	Glu	Arg	Leu	Thr	Lys 235	Ile	Gln	His	Ile	Leu 240
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Arg	Thr	Asn 35	Val	Arg	Lys	Gly	Leu 40	Leu	Leu	Ala	Gln	Lys 45	Thr	Thr	Ser
Cys	Arg 50	Glu	Asn	Thr	Arg	Asn 55	Leu	Arg	His	Arg	Leu 60	Ile	Leu	Leu	Glu
Tyr 65	His	His	Lys	Leu	Arg 70	Lys	Thr	Tyr	Arg	Leu 75	His	Trp	Glu	Phe	Leu 80
Leu	Val	Phe	Ser	Ala 85	Tyr	Phe	Phe	His	Leu 90	His	Leu	Gln	Ser	His 95	Pro
Val	Leu	Lys	Glu 100	Thr	Thr	Phe	Phe	Ser 105	Ala	Glu	His	Leu	Phe 110	Leu	Glu
Leu	Thr	Glu 115	Gln	Val	Leu	Arg	Ala 120	Leu	Phe	Phe	Gln	Thr 125	Val	Leu	Ser
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Gly	Ile	Leu 35	Ala	Gly	Ala	Thr	Ala 40	Asn	Lys	Ala	Ser	His 45	Asn	Arg	Thr
Arg	Ala 50	Leu	Gln	Ser	His	Ser 55	Ser	Pro	Glu	Gly	Lys 60	Glu	Glu	Pro	Glu
Pro 65	Leu	Ser	Pro	Glu	Leu 70	Glu	Tyr	Ile	Pro	Arg 75	Lys	Arg	Gly	Lys	Asn 80
Pro	Met	Lys	Ala	Val 85	Gly	Leu	Ala	Trp	Ala 90	Ile	Gly	Phe	Pro	Cys 95	Gly
Ile	Leu	Leu	Phe 100	Ile	Leu	Thr	Lys	Arg 105	Glu	Val	Asp	Lys	Asp 110	Arg	Val
Lys	Gln	Met 115	Lys	Ala	Arg	Gln	Asn 120	Met	Arg	Leu	Ser	Asn 125	Thr	Gly	Glu
Tvr	Glu	Ser	Gln	Ara	Phe	Ara	Ala	Ser	Ser	Gln	Ser	Ala	Pro	Ser	Pro

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Arg	Phe	Ala	His 20	Ser	Leu	Lys	Gln	Asn 25	Val	Ala	Met	Asn	Ile 30	Gln	Pro
Leu	His	Thr 35	Tyr	Lys	Asp	Val	Arg 40	Met	Ile	Pro	Pro	Thr 45	Lys	His	Thr
His	Ser 50	His	Thr	Arg	Thr	His 55	Thr	His	Met	His	Thr 60	Arg	Ala	Cys	Thr
His 65	Gly	His	Met	His	Thr 70	His	Thr	His	Thr						
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Glu	Cys	Gly	His 20	Glu	Tyr	Ser	Ala	Pro 25	Ala	Tyr	Ile	Gln	Arg 30	Cys	Thr
His	Asp	Ser 35	Pro	His	Gln	Ala	His 40	Thr	Gln	Ser	His	Thr 45	His	Thr	His
Thr	His 50	Ala	His	Thr	Arg	Val 55	His	Thr	Arg	Thr	His 60	Ala	His	Thr	His
Ala 65	His	Val	Asn	Thr	Cys 70	Thr	His	Ala	His	Thr 75	Cys	Thr	His	Ala	His 80
Thr	Asp	Thr	Leu												
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Leu	Arg	Val	Arg 20	Val	Cys	Val	His	Val 25	Ser	Val	Cys	Ala	Arg 30	Ala	Cys

Val His Val Cys Val Cys Ala Cys Val Thr Val Cys Val Leu Gly Gly

Glu Phe His Cys Ser

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Ser Trp Leu Gly Phe Glu Ile Leu Cys Arg Tyr Gln Asn Ile Trp Asn

· ...

60 50 55 Leu Ile Ile Met Lys Asp Thr Gly Leu Gln Leu Arg Pro Ser 80 75 Tyr Leu Pro Arg Lys Gly Leu Met Gly Leu Pro Pro Gly Asn Lys 95 90 85 Pro Ile His His His Gln Ile Leu Leu Lys Leu Leu Arg Asp Ala Asn 110 105 100 Gly Glu Lys Ser Leu Ser Val Met Leu Phe Leu Ser Lys Asp Phe Pro 125 120 115 Pro His Glu Met Leu Thr Ala Val Asn Leu Glu Met Phe Leu Ala Arg 130 135 140 Glu Val Trp Ser Arg Asn Glu Leu Trp Met Arq Glu Lys Ala Ser Arg 160 155 150 145 Ala Gly Glu Gln Ser Ile Leu Ala Ala Ala Lys Pro Asp Ile Thr Glu 175 170 165 Lys Ala Thr Leu Glu Ile Pro Gln Ala Gln Gly Leu Glu Ala Met 190 185 180 Thr. Glu Ala Cys Arg Tyr Glu Thr Ala Gln Lys Val Lys Asn Leu Lys 205 200 195 Val Asp Gly Gln Thr Val Ala His Ile Gly Ala Phe Gly Leu Pro 220 215 His Leu Glu Leu Leu Ala Phe Gly Ser Asp Arg Met His Met Leu 240 230 235 225 Ala Val Asn Ala Arg Pro Trp Met Gly Pro Ile Pro Gly Glu Lys 255 250 245 <210> 190 <211> 196 <212> PRT <213> homo sapiens <400> 190 Ser Ala Gly Gly Ile Gly Pro Ile His Phe Pro Thr Ala Phe Leu 15 10 Trp Ser Glu Pro Asn Asn Met Ser Ile Arg Ser Arg Cys Ala Ser Ser 30 25 20 Thr Val Met Gly Ser Pro Lys Ala Pro Trp Trp Pro Ser Thr Ala Val 45 40 35 Phe Phe Thr Phe Ser Trp Val Val Ser Leu Leu Gln Ala Ala Ser Tyr 60 55 50 Ile Ala Cys Ser Ala Asp Ser Pro Trp Ile Phe Ser Arg Gly Val Ala 80 75 70 65 Ser Cys Gly Ser Val Met Met Leu Ala Phe Ser Ala Ala Ala Arg Pro 90 85

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Ser	Ile	Ser 115	Gly	Cys	Ser	Lys	Phe 120	Thr	Ala	Val	Arg	Lys 125	Arg	Met	Ala
Asp	Lys 130	Leu	Pro	Phe	Ser	Ser 135	Ile	Thr	Asp	Lys	Lys 140	Ser	Leu	Gly	Lys
Trp 145	Met	Gly	Ile	Trp	Arg 150	Trp	Cys	Leu	Arg	Ser 155	Phe	Lys	Ser	Phe	Ala 160
Met	Tyr	Ser	Pro	Leu 165	Arg	Gly	Ser	Arg	Pro 170	Gly	Gly	Leu	Phe	Pro 175	Leu
Ser	Phe	Met	Ile 180	Pro	Val	Met	Arg	Leu 185	Gly	Arg	Asn	Cys	Arg 190	Leu	Met
Phe	Gln	Ile 195	Phe												
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Lys	Thr	Asn 35	Ile	Lys	Thr	Val	Cys 40	Thr	Tyr	Trp	Glu	Asp 45	Phe	His	Ser
Cys	Thr 50	Val	Thr	Ala	Leu	Thr 55	Asp	Cys	Gln	Glu	Gly 60	Ala	Lys	Asp	Met
Trp 65	Asp	Lys	Leu	Arg	Lys 70	Glu	Ser	Lys	Asn	Leu 75	Asn	Ile	Gln	Gly	Ser 80
Leu	Phe	Glu	Leu	Cys 85	Gly	Ser	Gly	Asn	Gly 90	Ala	Ala	Gly	Ser	Leu 95	Leu
Pro	Ala	Phe	Pro 100	Val	Leu	Leu	Val	Ser 105	Leu	Ser	Ala	Ala	Leu 110	Ala	Thr
Trp	Leu	Ser 115	Phe												
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<213> homo sapiens

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Ile	Ile	Trp 35	Glu	Leu	Ile	Lys	Glu 40	Lys	Leu	Ile	Phe	Pro 45	Tyr	Val	Glu
Leu	Asp 50	Leu	His	Ser	Tyr	Asp 55	Leu	Gly	Ile	Glu	Asn 60	Arg	Asp	Ala	Thr
Asn 65	Asp	Gln	Val	Thr	Lys 70	Asp	Ala	Ala	Glu	Ala 75	Ile	Lys	Lys	His	Asn 80
Val	Gly	Val	Lys	Cys 85	Ala	Thr	Ile	Thr	Pro 90	Asp	Glu	Lys	Arg	Val 95	Glu
Glu	Phe	Lys	Leu 100	Lys	Gln	Met	Trp	Lys 105	Ser	Pro	Asn	Gly	Thr 110	Ile	Arg
Asn	Ile	Leu 115	Gly	Gly	Thr	Val	Phe 120	Arg	Glu	Ala	Ile	Ile 125	Сув	Lys	Asn
Ile	Pro 130	Arg	Leu	Val	Ser	Gly 135	Trp	Val	Lys	Pro	Ile 140	Ile	Ile	Gly	Arg
His 145	Ala	Tyr	Gly	Asp	Gln 150	Tyr	Arg	Ala	Thr	Asp 155	Phe	Val	Val	Pro	Gly 160
Pro	Gly	Lys	Val	Glu 165	Ile	Thr	Tyr	Thr	Pro 170	Ser	Asp	Gly	Thr	Gln 175	Lys
Val	Thr	Tyr	Leu 180	Val	His	Asn	Phe	Glu 185	Glu	Gly	Gly	Gly	Val 190	Ala	Met
Gly	Met	Tyr 195	Asn	Gln	Asp	Lys	Ser '200	Ile	Glu	Asp	Phe	Ala 205	His	Ser	Ser
Phe	Gln 210	Met	Ala	Leu	Ser	Lys 215	Gly	Trp	Pro	Leu	Tyr 220	Leu	Ser	Thr	Lys
Asn 225	Thr	Ile	Leu	Lys	Lys 230	Tyr	Asp	Gly	Arg	Phe 235	Lys	Asp	Ile	Phe	Gln 240
Glu	Ile	Tyr	Asp	Lys 245	Gln	Tyr	Lys	Ser	Gln 250	Phe	Glu	Ala	Gln	Lys 255	Ile
Trp	Tyr	Glu	His 260	Arg	Leu	Ile	Asp	Asp 265	Met	Val	Ala	Gln	Ala 270	Met	Lys
Ser	Glu	Gly 275	Gly	Phe	Ile	Trp	Ala 280	Cys	Lys	Asn	Tyr	Asp 285	Gly	Asp	Val
Gln	Ser 290	Asp	Ser	Val	Ala	Gln 295	Gly	Tyr	Gly	Ser	Leu 300	Gly	Met	Met	Thr
Ser 305	Val	Leu	Val	Суз	Pro 310	Asp	Gly	Lys	Thr	Val 315	Glu	Ala	Glu	Ala	Ala 320

His	Gly	Thr	Val	Thr 325	Arg	His	Tyr	Arg	Met 330	Tyr	Gln	Lys	Gly	Gln 335	Glu '
Thr	Ser	Thr	Asn 340	Pro	Ile	Ala	Ser	Ile 345	Phe	Ala	Trp	Thr	Arg 350	Gly	Leu
Ala	His	Arg 355	Ala	Lys	Leu	Asp	Asn 360	Asn	Lys	Glu	Leu	Ala 365	Phe	Phe	Ala
Asn	Ala 370	Leu	Glu	Glu	Val	Ser 375	Ile	Glu	Thr	Ile	Glu 380	Ala	Gly	Phe	Met
Thr 385	Lys	Asp	Leu	Ala	Ala 390	Cys	Ile	Lys	Gly	Leu 395	Pro	Asn	Val	Gln	Arg 400
Ser	Asp	Tyr	Leu	Asn 405	Thr	Phe	Glu	Phe	Met 410	Asp	Lys	Leu	Gly	Glu 415	Asn
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Gln	Ala	Leu	Leu 20	Cys	Gly	Leu	Thr	Leu 25	Trp	Ser	Arg	Gln	Lys 30	Trp	Lys
Gln	Trp	Asp 35	Trp	Trp	Thr	Ser	Pro 40	Val	Leu	Ser	Gly	Thr 45	Cys	Gly	Ser
Asp	Gly 50	Leu	Gln	Ser	Arg	Gly 55	Gln	Pro	Leu	Leu	Leu 60	Leu	Ser	Cys	His
Leu 65	Asp	Lys	Pro	Ala	Arg 70	Trp	'Ser	Ser	Cys	Arg 75	Glu	Ser	His	Thr	Leu 80
Gly	Pro	Gln	Ser	Pro 85	Thr	Ala	Arg	His	His 90	His	Ser	Phe	Tyr	Arg 95	Pro
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Val	Met	Tyr	Gln 20	Val	Cys	His	Leu	Leu 25	Gly	Ser	Val	Thr	Trp 30	Cys	Val

Gly Tyr Leu Tyr Phe Ser Arg Pro Arg Asn Asn Lys Ile Ser Cys Ser

45 40 35 Asp Arg Phe Tyr Pro Thr Asp Ser Met Thr Tyr Pro Ile Val Leu Ile 60 55 50 Phe Ser Glu Asn Gly Gly Asp Ile Phe Ala Asp Pro His Ser Thr Lys 80 75 70 65 Gly Ile Trp Tyr Ala Ser Ala Thr Gln Asn Ile Asp 85 <210> 197 <211> 410 <212> PRT <213> homo sapiens <400> 197 Ser Leu Pro Leu Ile Gln Ser Val Lys Ile His Gln Pro Asn Asp Thr 15 1.0 5 1 Arq Asp Gly Phe Pro Arg Glu Cys Pro Gly Cys Pro Asn Lys Asn Arg 30 25 20 His Phe Phe Phe Asp Arg Asp Val Arg Met Ile Cys Val Phe Lys Gly 45 35 Glu Val Ala Gln Leu His Ile Asp Gly Asn Glu Ile Leu Asp Ser 60 55 50 Ile Ala Arg His Ser Ala Gln Asn Pro Asp Met Leu Thr Val Val Phe 70 75 65 Ser His Ser Phe His Thr Val Ser Gly Arg Lys Lys Leu Pro Lys 85 Phe Ser Asn Thr Thr Val Glu Lys Glu Ala Gly Phe Leu His Arq Asp 110 105 100 Glu Glu Lys Glu Ala Asp Lys Gly Lys Asn Lys Thr Thr Ser Pro Pro 125 120 115 Phe Gly Ala Cys Val Lys Leu Thr Ile Asp Gly Ile Ile Ala Tyr Asp 140 135 130 Gln Ile Gly Asp Lys Thr Pro Ser Ser Gln Ala Lys Asp Val Glu Gly 160 155 145 150 Gln Gln Val Ala Pro Gly Gln Arg Ile Ser Asp Lys Val Glu Phe Ser 175 170 165 Arg Leu Ser Lys Ser Asn Arg Leu Leu Gly Arg Asn Val Thr Cys 190 185 180 Ile Glu Thr Ala Phe Gly Phe Gly Thr Leu Lys Asp Asn Val Ala Tyr 205 200 195 Glu Phe Ser Gly Ile Phe Phe His Tyr Ser His Asp Lys Glu Asn 220 215 210 Lys Glu Tyr Ser Leu Met Val Asp Glu Leu Gly Asp Val Ser Leu 240 235 230 225

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Gly	Lys	Gly	Asn	Lys 245	Val	Ser	Ala	Glu	Lys 250	Val	Asn	Lys	Thr	His 255	Ser .
Val	Asn	Gly	Ile 260	Thr	Glu	Glu	Ala	Asp 265	Pro	Thr	Ile	Tyr	Ser 270	Gly	Lys
Val	Ile	Arg 275	Pro	Leu	Arg	Ser	Val 280	Asp	Pro	Thr	Gln	Thr 285	Glu	Tyr	Gln
Gly	Met 290	Ile	Glu	Ile	Val	Glu 295	Glu	Gly	Asp	Met	Lys 300	Gly	Glu	Val	Tyr
Pro 305	Phe	Gly	Ile	Val	Gly 310	Met	Ala	Asn	Lys	Gly 315	Asp	Cys	Leu	Gln	Lys 320
Gly	Glu	Ser	Val	Lys 325	Phe	Gln	Leu	Cys	Val 330	Leu	Gly	Gln	Asn	Ala 335	Gln
Thr	Met	Ala	Tyr 340	Asn	Ile	Thr	Pro	Leu 345	Arg	Arg	Ala	Thr	Val 350	Glu	Cys
Val	Lys	Asp 355	Gln	Phe	Gly	Phe	Ile 360	Asn	Tyr	Glu	Val	Gly 365	Asp	Ser	Lys
Lys	Leu 370	Phe	Phe	His	Val	Lys 375	Glu	Val	Gln	Asp	Gly 380	Ile	Glu	Leu	Gln
Ala 385	Gly	Asp	Glu	Val	Glu 390	Phe	Ser	Val	Ile	Pro 395	Lys	Ser	Ser	Gly	Gly 400
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Ile	Ser	Tyr	Phe 20	Ile	Val	Asn	Glu	Ala 25	Lys	Leu	Ile	Phe	His 30	Thr	Phe
His	Cys	Gly 35	Pro	Ala	Gln	Gly	Cys 40	Asp	Val	Val	Ser	His 45	Ser	Leu	Cys
Ile	Leu 50	Ala	Gln	Asp	Thr	Gln 55	Leu	Glu	Leu	Asp	Ala 60	Leu	Pro	Phe	Leu
Gln 65	Ala	Ile	Pro	Phe	Val 70	Gly	His	Pro	Asn	Asp 75	Ala	Lys	Trp	Ile	Asp 80
Leu	Thr	Phe	His	Ile 85	Ala	Leu	Leu	His	Asn 90	Leu	Asn	His	Ser	Leu 95	Val
Leu	Ser	Leu	Cys 100	Trp	Ile	Asn	Thr	Pro 105	Gln	Gly	Ala	Asn	Tyr 110	Phe	Ala
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Asn	Thr	Lys	Phe 20	Asn	Leu	Ile	Ser	Tyr 25	Leu	Arg	Arg	Ser	Arg 30	Ser	Phe
His	Ile	Leu 35	Gly	Leu	Lys	Ser	Asn 40	Ser	Gln	Phe	His	Pro 45	Thr	Val	Ile
Ile	Ser 50	Asn	Asn	Ala	Ile	Leu 55	Ser	Leu	Leu	Leu	Phe 60	Ala	Phe	Ile	Trp
Ala 65	Ser	Gly	Phe	Arg	Ile 70	Gly	Lys	Ser	Gly	Phe 75	Phe	Phe	Tyr	Arg	Ala 80
Gln	Lys	Thr	Val	Ile 85											
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Cys	Cys	Tyr	Gln 20	Ala	His	Ala	Leu	Val 25	Cys	Pro	Ala	Val	Ala 30	Ser	Glu
Ile	Thr	Val 35	Phe	Leu		Leu	40	Asp		Ala		Asn 45	Leu		Val
	Lys 50		Asn			55			Leu		60				Val
Lys 65	His	Cys	Thr	Asp	Gln 70	Ile	Ser	Phe	Lys	Lys 75	Arg	Leu	Leu	Ile	
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Gly	Leu	Ser	Leu 20		Thr		Arg	25		Ala			30		
Lys	Lys	Thr 35	Val	Ile	Ser	Glu	Ala 40		Ala	Gly	Gln	Thr 45	Arg	Ala	Trp

Ala	Trp 50														-
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Met	Ser	His	Thr 20	His	Ile	Phe	Ser	Leu 25	Phe	Pro	Pro	Arg	Thr 30	Phe	Ser
Asn	Glu	Lys 35	Pro	Phe	Leu	Lys	Arg 40	Tyr	Leu	Ile	Gly	Ala 45	Val	Leu	His
Phe	Gln 50	Leu	Gly	Cys	Lys	Ser 55	Phe	Trp	Arg	Trp	Ile 60	Lys	Phe	Gly	Asn
Leu 65	Glu	Val	Tyr	Arg	Ser 70	Val	Thr								
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Ser	Thr	Ser	Thr 20	Cys	Ser	Ser	Tyr	Thr 25	Leu	Gly	Thr	Arg	Leu 30	Pro	Val
Gly	Gly	Arg 35	Gly	Pro	Thr	Lys	Val 40	Thr	Cys	Cys	Thr	Ser 45	Asn	Arg	Leu
Thr	Leu 50	Ser	Leu	Asp											
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Arg	Asn	Ala	Gly 20	Asn	Leu	Tyr	Thr	Arg 25	Gln	Val	Gln	Ile	Glu 30	Gly	Glu
Thr	Leu	Ala 35	Leu	Gln	Val	Gln	Asp 40	Thr	Pro	Gly	Ile	Gln 45	Val	His	Glu
Asn	Ser 50	Leu	Ser	Cys	Ser	Glu 55	Gln	Leu	Asn	Arg	Cys 60	Ile	Arg	Trp	Ala

Asp 65	Ala	Val	Val	Ile	Val 70	Phe	Ser	Ile	Thr	Asp 75	Tyr	Lys	Ser	Tyr	Glu · 80
Leu	Ile	Ser	Gln	Leu 85	His	Gln	His	Val	Gln 90	Gln	Leu	His	Leu	Gly 95	His
Pro	Ala	Ala	Cys 100	Gly	Trp	Ser	Trp	Ala 105	Asn	Lys	Ser	Asp	Leu 110	Leu	His
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Cys	Ser	Ser	Ala 20	Met	Ala	Pro	Lys	Gly 25	Ser	Ser	Lys	Gln	Gln 30	Ser	Glu
Glu	Asp	Leu 35	Leu	Leu	Gln	Asp	Phe 40	Ser	Arg	Asn	Leu	Ser 45	Ala	Lys	Ser
Ser	Ala 50	Leu	Phe	Phe	Gly	Asn 55	Ala	Phe	Ile	Val	Ser 60	Ala	Ile	Pro	Ile
Trp 65	Leu	Tyr	Trp	Arg	Ile 70	Trp	His	Met	Asp	Leu 75	Ile	Gln	Ser	Ala	Val 80
Leu	Tyr	Ser	Val	Met 85	Thr	Leu	Val	Ser	Thr 90	Tyr	Leu	Val	Ala	Phe 95	Ala
Tyr	Lys	Asn	Val 100	Lys	Phe	Val	Leu	Lys 105	His	Lys	Val	Ala	Gln 110	Lys	Arg
Glu	Asp	Ala 115	Val	Ser	Lys	Glu	'Val 120	Thr	Arg	Lys	Leu	Ser 125	Glu	Ala	Asp
Asn	Arg 130	Lys	Met	Ser	Arg	Lys 135	Glu	Lys	Asp	Glu	Arg 140	Ile	Leu	Trp	Lys
Lys 145		Glu	Val	Ala	Asp 150	Tyr	Glu	Ala	Thr	Thr 155	Phe	Ser	Ile	Phe	Tyr 160
Asn	Asn	Thr	Leu	Phe 165	Leu	Val	Val	Val	Ile 170	Val	Ala	Ser	Phe	Phe 175	Ile
Leu	Lys	Asn	Phe 180	Asn	Pro	Thr	Val	Asn 185	Tyr	Ile	Leu	Ser	Ile 190	Ser	Ala
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Pro	Cys	Gln	Leu 20	His	Pro	Leu	Ala	Leu 25	Cys	Leu	Trp	Val -	Ala 30	Cys	Gly
Ile	Trp	Lys 35	Ser	Ser	Arg	Val	Val 40	Arg	Val	Gly	Asp	Thr 45	Arg	Cys	Phe
Tyr	Ser 50	Leu	Glu	Pro	Leu	Lys 55	Asn	Pro	Ala	Glu	Cys 60	Asn	Ser	Val	Phe
Val 65	Tyr	Trp	Leu	Phe	Phe 70	Asp	Arg	Leu	Leu	Lys 75	Leu	Asn	Glu	Leu	Lys 80
Gly	Lys	Leu	Arg	Val 85	Leu	Gly	Arg	Leu	Leu 90	Lys	Gly	Lys	Lys	Сув 95	Leu
Ala	Met	Cys	Cys 100	Asn	His	Lys	Arg	Arg 105	Lys						
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Tyr	Glu	Glu	Gly 20	Ser	Asn	Asn	Asp	His 25	Asp	Gln	Glu	Gln	Ser 30	Val	Val
Ile	Glu	Asp 35	Gly	Lys	Cys	Cys	Ser 40	Phe	Ile	Ile	Ser	Asn 45	Phe	Ile	Leu
Leu	Pro 50		Asp	Ser	Phe	55	•			Pro	Arg 60				Ile
Ile 65		Phe	Arg	Lys	Phe 70	Ser	Ser	His	Phe	Phe 75	Gly	Asn	Ser	Ile	80
Pro	Leu	Leu	Cys	Tyr 85	Phe	Val	Leu	Glu	Asn 90		Phe	His	Ile	Leu 95	Val
Cys	Lys	Gly	Туг 100	Gln	Ile	Cys	Ala	Tyr 105							
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Arg	g Phe	e Glu	ı Glu	ı Lys	Arg	g Phe	e Lys	s Lev	ı Ası	His	s Ser	· Val	. Sei	s Ser	r Thr

30 25 20 Gln Thr Asp Gly Trp Leu Ile Phe Gln Asp Gln Trp Arg Asn Gly His 45 40 , 35 Val Leu Leu Glu Leu Met Leu Asn Val Asn Leu Ala Asn Leu Asp Asp 55 50 Gln Ala Gln Leu His Ala Glu Ala Glu Ser Leu Gln Lys Lys Lys Gln 80 75 70 65 Gln Glu Asn Lys Arg Arg Arg Val Ala Lys Phe Leu Glu Ile Leu Met 95 90 85 Asp Ile Lys Glu Glu Glu Leu Ser Val Leu Lys Ile Gln Gln Glu Leu 105 100 Asp Ser Val Ser Glu Pro Tyr Ser Gly Leu Glu Glu Met Ser Val Arg 125 120 115 Ile Ile Ser His Ser Ser Pro Ser Ala Pro Phe Glu Pro Gln Thr Val 140 135 130 Gln Phe Ser Gly Ser Ser Gly Pro Gln Pro Glu Tyr Ser Ser Thr Asp 160 155 150 145 Arg Lys Arq Ser Thr Leu Ala Tyr Asn Ser Trp Gln Pro Lys Thr Lys 175 170 165 Thr Phe Ser Cys Tyr Glu Gln Asp Leu Glu Thr Ala His Phe Leu Arg 190 185 180 Ser Gln Leu Asp Ala Thr Asp Ser Arg Ile Ser Asp Arg Ser Arg Met 205 200 195 Val Arg Ser Tyr Asn Thr Arg Phe Lys Gln Glu Cys Leu Ser Phe Glu 220 215 210 Gly Ser Ser Leu Tyr Asn Asp Ala Ser Ser Tyr Thr Leu Ala Pro Leu 240 235 230 225 Ala Phe Asp Cys Asp Tyr Arg Glu Phe 'Asp Ser Ser Ile Val 255 250 245 Ile Thr Val Glu Tyr Asp Val Tyr Lys Ile Lys Thr Lys Val Gly Ala 270 265 260 Thr Cys Asn Met Glu Tyr Pro Glu Asn His Ala Val Asp Ile Gln Asp 285 280 275 Leu His Lys Asn Leu Tyr Ser Ser Ser Trp Cys Ile Ile Ser Lys Ser 300 295 290 Gly Thr Phe Asp Thr Val Ile Leu Trp Glu Gly Asp Tyr Ser Ser Ala 320 310 305 Ser Trp Cys His Glu Lys Arg Glu Gln Ser Lys Val Tyr Gly Gln Arg 335 330 325 Gly Ser Asp Ser Leu Ala Pro Lys Leu Phe Asn Leu Met Asp Val Asp 350 345 340 Asn Val Ala Ser Thr Asn Leu Asp Ser Lys Leu Trp Lys Val Ala Asp

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Ser	Ile 370	Glu	Ala	Lys	Ala	Asn 375	Val	Cys	Cys	Val	Lys 380	Phe	Ser	Pro	Ser
Ser 385	Arg	Tyr	His	Leu	Ala 390	Phe	Gly	Cys	Ala	Asp 395	His	Cys	Val	His	Tyr 400
Tyr	Asp	Leu	Arg	Asn 405	Thr	Lys	Gln	Pro	Ile 410	Met	Val	Phe	Lys	Gly 415	His
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Tyr	Cys 450	Leu	Arg	Ser	Phe	Lys 455	Gly	His	Ile	Asn	Glu 460	Lys	Asn	Phe	Val
Gly 465	Leu	Ala	Ser	Asn	Gly 470	Asp	Tyr	Ile	Ala	Cys 475	Gly	Ser	Glu	Asn	Asn 480
Ser	Leu	Tyr	Leu	Tyr 485	Tyr	Lys	Gly	Leu	Ser 490	Lys	Thr	Leu	Leu	Thr 495	Phe
Lys	Phe	Asp	Thr 500	Val	Lys	Ser	Val	Leu 505	Asp	Lys	Asp	Arg	Lys 510	Glu	Asp
Asp	Thr	Asn 515	Glu	Phe	Val	Ser	Ala 520	Val	Cys	Trp	Arg	Ala 525	Leu	Pro	Asp
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Ser	Thr	Leu	Leu 20	Ile	Ser	Ser	Ser	Lys 25	Thr	Leu	Ser	Ser	Phe 30	Trp	Ile
Cys	Ser	Ser 35	Cys	Ser	Leu	Leu	Phe 40	Leu	Leu	Ala	Thr	Leu 45	Arg	Asn	Ser
Ile	Arg 50	Ile	Cys	Ser	Trp	Ala 55	Ala	Cys	Asp	Ser	Ala 60	Ser	Ser	Cys	Phe
Phe 65	Phe	Cys	Thr	Ser	Asn 70	Ser	Asn	Ile	Arg	Leu 75	Thr	Leu	Ala	Lys	Ser 80
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Phe	Val	Ser 35	Leu	Ser	Gln	Lys	Leu 40	Asp	Asn	Thr	Thr	Lys 45	Ser	Ser	Asn
Val	His 50	Gly	Val	Thr	Leu	Met 55	Val	Glu	Ser	Trp	Leu 60	Gly	Ile	Pro	Asn
Val 65	Pro	Lys	Val	Ile	Lys 70	Glu	Gly	Lys	Glu	Lys 75	Lys	Lys	Lys	Ile	Phe 80
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Ser	Leu	Leu	Trp 20	Ile	Val	Cys	Ile	Pro 25	Tyr	Leu	Leu	Ser	Ile 30	Gly	Leu
Cys	Val	Asp 35	Ile	Leu	Phe	Leu	Phe 40	Val	Gln	His	Leu	Leu 45	Pro	His	Leu
Leu	Val 50	Thr	Gln	Pro	Leu	Phe 55	'Ile	Cys	Gly	Glu	Pro 60	Ile	Pro	Cys	Gly
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Trp	Pro	Arg	Asn 20	Met	Lys	Arg	Cys	Ser 25	Ser	Ser	Leu	Ile	Phe 30		Glu
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Leu	Gln	Ala	Ile 20	Thr	Asp	Lys	Arg	Lys 25	Ile	Gln	Glu	Glu	Ile 30	Ser	Gln
Lys	Arg	Leu 35	Lys	Ile	Glu	Glu	Asp 40	Lys	Leu	Lys	His	Gln 45	His	Leu	Lys
Lys	Lys 50	Ala	Leu	Arg	Glu	Lys 55	Trp	Leu	Leu	Asp	Gly 60	Ile	Ser	Ser	Gly
Lys 65	Glu	Gln	Glu	Glu	Met 70	Lys	Lys	Gln	Asn	Gln 75	Gln	Asp	Gln	His	Gln 80
Ile	Gln	Val	Leu	Glu 85	Gln	Ser	Ile	Leu	Arg 90	Leu	Glu	Lys	Glu	Ile 95	Gln
Asp	Leu	Glu	Lys 100	Ala	Glu	Leu	Gln	Ile 105	Ser	Thr	Lys	Glu	Glu 110	Ala	Ile
Leu	Lys	Lys 115	Leu	Lys	Ser	Ile	Glu 120	Arg	Thr	Thr	Glu	Asp 125	Ile	Ile	Arg
Ser	Val 130	Lys	Val	Glu	Arg	Glu 135	Glu	Arg	Ala	Glu	Glu 140	Ser	Ile	Glu	Asp
Ile 145	Tyr	Ala	Asn	Ile	Pro 150	Asp	Leu	Pro	Lys	Ser 155	Tyr	Ile	Pro	Ser	Arg 160
Leu	Arg	Lys	Glu	Ile 165	Asn	Glu	Glu	Lys	Glu 170	Asp	Asp	Glu	Gln	Asn 175	Arg
Lys	Ala	Leu	Tyr 180	Ala	Met	Glu	Ile	Lys 185	Val	Glu	Lys	Asp	Leu 190	Arg	Thr
Gly	Glu	Ser 195	Thr	Val	Leu	Ser	Ser 200	Ile	Pro	Leu	Pro	Ser 205	Asp	Asp	Phe
Lys	Arg 210	Ser	Arg	Ser	Lys	Ser 215	Leu								
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Arg	Ser	His	Phe 20	Ser	Leu	Lys	Ala	Phe 25		Phe	Lys	Cys	Trp 30	Cys	Phe
Ser	Leu	Ser 35		Ser	Ile	Phe	Arg 40	_	Phe	Cys	Glu	Ile 45		Ser	Cys
Ile	Phe 50		Leu	Ser	Val	Met 55		Trp	Ser	Leu	Pro 60		Thr	Ser	Ser
Ala 65		Ser	Ile	Leu	Glu 70		Lys	Asp	Ser	Gln 75		Gly	. TÀ2	Gln	Val 80

9

Gln	Ser	Tyr	His	Lys	Ser	Arg	Ser	Leu		Gly	Glu	Arg	Ser	-	Gly
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Trp	Gln	Trp 35	Ser	His	Trp	Ala	Lys 40	Trp	Ala	Met	Leu	Phe 45	Ala	Ser	Gly
Gly	Phe 50	Gln	Val	Lys	Leu	Tyr 55	Asp	Ile	Glu	Gln	Gln 60	Gln	Ile	Arg	Asn
Ala 65	Leu	Glu	Asn	Ile	Arg 70	Lys	Glu	Met	Lys	Leu 75	Leu	Glu	Gln	Ala	Gly 80
Ser	Leu	Lys	Gly	Ser 85	Leu	Ser	Val	Glu	Glu 90	Gln	Leu	Ser	Leu	Ile 95	Ser
Gly	Cys	Pro	Asn 100	Ile	Gln	Glu	Ala	Val 105	Glu	Gly	Ala	Met	His 110	Ile	Gln
Glu	Cys	Val 115	Pro	Glu	Asp	Leu	Glu 120	Leu	Lys	Lys	Lys	Ile 125	Phe	Ala	Gln
Leu	Asp		Ile	Ile	Asp	Asp 135	Arg	Val	Ile	Leu	Ser 140	Ser	Ser	Thr	Ser
Cys		. Met	Pro	Ser	Lys 150	Leu	'Phe	Ala	Gly	Leu 155	Val	His	Val	Lys	Gln 160
Cys	: Ile	. Val	Ala	His 165	Pro	Val	Asn	Pro	Pro 170	_	Tyr	Ile	Pro	Leu 175	Val
Glı	ı Leu	ı Val	Pro 180	His	Pro	Glu	Thr	Ala 185		Thr	Thr	Val	Asp 190	Arg	Thr
His	s Ala	Leu 195		Lys	Lys	Ile	Gly 200		. Cys	Pro	Met	Arg 205		Gln	Lys
Glı	u Val		Gly	Phe	Val	Leu 215	a Asn	Arg	J Lev	ı Glr	1 Tyr 220		Ile	Ile	Ser
Gl [.] 22		a Trp	Arg	ı Leu	Val 230		ı Glu	Gly	/ Ile	e Val		Pro	ser	Asp	Leu 240
As	p Lei	ı Val	L Met	Ser 245		ı Gly	/ Lev	ı Gly	/ Met	Arg	д Туг	: Ala	e Phe	11e 255	_

Pro Leu Glu Thr Met His Leu Asn Ala Glu Gly Met Leu Ser Tyr Cys

			260					265					270		
Asp	Arg	Tyr 275	Ser	Glu	Gly	Ile	Lys 280	His	Val	Leu	Gln	Thr 285	Phe	Gly	Pro
Ile	Pro 290	Glu	Phe	Ser	Arg	Ala 295	Thr	Ala	Glu	Lys	Val 300	Asn	Gln	Asp	Met
Cys 305	Met	Lys	Val	Pro	Asp 310	Asp	Pro	Glu	His	Leu 315	Ala	Ala	Arg	Arg	Gln 320
Trp	Arg	Asp	Glu	Cys 325	Leu	Met	Arg	Leu	Ala 330	Lys	Leu	Lys	Ser	Gln 335	Val
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Ile	Phe	Cys	Pro 20	His	Ile	Asn	Met	Lys 25	Thr	Thr	Ile	Thr	Gly 30	Cys	Gln
Ile	Ile	Leu 35	Lys	Cys	Asn	Gln	Ala 40	Glu	Lys	Glu	Lys	Val 45	Lys	Ile	Ser
Arg	Leu 50	Ser	Ala	Gln	Val	Ala 55	Gly	Asn	Arg	Gln	Pro 60	Arg	Glu	Arg	Lys
Cys 65	Cys	Cys	Ala	Ala	Arg 70	Pro	Arg	Ala	Met	Ile 75	Gln	Ser	Asp	Gly	Gln 80
Thr	Thr	Gly	Leu	His 85	His	Pro	Thr	Gln	Ala 90	Ala	His	Lys	Thr	Ala 95	Ser
Leu	Gly	Ser	Pro 100	Trp	Ala	Ala	Thr	Tyr 105	Val	Thr	Glu	Gly			
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Leu	ı Gly	Asp		Ile	Pro	Ser	Ser 40		Ser	· Arg	Gln	Ala 45		Leu	Met
Ile	Ala 50		Cys	Arg	Arg	Phe 55		g Thr	Lys	Pro	Ala 60		Ser	Phe	Trp

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Pro Phe Gly Trp

Ile Phe

Ile

Cys

Phe

Ser

Phe Val

Phe

85 90

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Leu Ser Pro Ser Ala Ala Thr Met Ser Ala Ser Ala Val

Phe Ile Leu

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		255					360					365			
		355			~1	-		Me ess	T ou	Mot	Arg	Ala	Hig	Phe	Gly
Lys	Ser 370	Phe	Pro	GIA	Gly	Lys 375	Glu	Tyr	Leu	Mec	380				•
Leu 385	Pro	Ser	Val	Glu	Lys 390	Glu	Glu	Val	Glu	Gly 395	Arg	Pro	Pro	Ile	Gly 400
Val	Lys	Phe	Glu	Ile 405	Pro	Tyr	Phe	Thr	Val 410	Ser	Gly	Ile	Gln	Val 415	Arg
Tyr	Met	Lys	Ile 420	Ile	Glu	Lys	Ser	Gly 425	Tyr	Gln	Gly	Pro	Ala 430	Leu	Gly
Phe	Arg	Tyr 435	Ile	His	Pro	Glu	Trp 440	Ala	Ile	Thr	Asn	Phe 445	Arg	Tyr	Gln
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Pro	Gln	Gly	Arg 20	Ala	Leu	Val	Thr	Thr 25	Phe	Leu	Asn	Asp	Leu 30	His	Val
Ser	Asp	Leu 35	Asp	Pro	Arg	Asp	Gly 40	Glu	Val	Gly	Asp	Leu 45	Lys	Leu	Asp
Pro	Asp 50	Gly	Gly	Pro	Ala	Leu 55	His	Leu	Phe	Leu	Phe 60	His	Thr	Gly	Glu
Ala 65	Lys	Val	Gly	Ser	His 70	Gln	Val ,	Leu	Leu	Ala 75	Pro	Arg	Glu	Arg	Leu 80
Asn	Thr	Pro	Asn	His 85	Asp	Val	Ser	Leu	Arg 90	His	Ile	Leu	Gly	Ala 95	Ala
His	Thr	Gly	Leu 100	Glu	Ser	Gly	Gly	Val 105	Gly	Ile	Ala	Gly	Tyr 110	Arg	His
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Phe	Ser	Thr	Leu 20		Arg	Pro	. Lys	Trp 25		Arg	Ile	Lys	Tyr 30		Leu

Pro	Pro	Gly 35	Lys	Asp	Leu	Ile	Leu 40	Gln	Ile	Thr	Thr	Phe 45	Leu	Ser	Gly ·
Thr	Tyr 50	Leu	Ala	Leu	Pro	Thr 55	Leu	Val	Leu	Asn	Leu 60	Gly	Glu	Ser	Ala
Ser 65	Leu	Gly	Thr	Gly	Thr 70	Asp	Ile	Ser	Thr	Pro 75	Leu	Ala	Thr	Asp	Cys 80
Phe	Leu	Asn	Cys	Pro 85	Leu	Ala	Leu	Thr	Met 90	Ile	Ser	Thr	Arg	Leu 95	Trp
Glu	Asn	Phe	Ser 100	Met	Thr	Asp	Ser	Ile 105	Gln	Ile	Ser	Gly	Leu 110	Thr	Trp
Val	Leu	Arg 115	Arg	Tyr	Asp	Met	Ser 120	Ser	Lys	Ser	Pro	Ser 125	Gly	Gly	Met
Lys	Glu 130	Met	Val	Arg	Ser	Leu 135	Ser	Lys	Arg	Glu	Ser 140	Arg	Thr	His	Trp
Trp	Asn	Phe	Thr	Ser	Ser 150	Ser	Ser	Thr	Asp	Leu 155	Phe	Leu	Leu	Arg	Pro 160
Val	Ser	Ser	Lys	Ser 165	Thr	Arg	Ser	Leu	Arg 170	Pro	Ser	Arg	Ser	Ser 175	Gly
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Arg	Arg	Thr 195	Leu	Pro	Leu	Ala	Leu 200	Thr	Ser	Arg	Leu	Thr 205	Asp	Ser	Met
Thr	Ser 210	Met	Lys	Thr	Ser	Phe 215	Phe	Leu	Tyr	Leu	Ile 220	Pro	Ser	Glu	Arg
Gln 225	Asp	Thr	Ala	Leu	Val 230	Thr	Val	Gly	Gly	Thr 235	Arg	Asp	Leu	Pro	Val 240
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<212> PRT

<213> homo sapiens

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Ile	Pro	Leu 35	Ser	Gln	Glu	Glu	Ile 40	Thr	Leu	Gln	Gly	His 45	Ala	Phe	Glu
Ala	Arg 50	Ile	Tyr	Ala	Glu	Asp 55	Pro	Ser	Asn	Asn	Phe 60	Met	Pro	Val	Ala
Gly	Pro	Leu	Val	His	Leu	Ser	Thr	Pro	Arg	Ala	Asp	Pro	Ser	Thr	Arg

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Ile	Glu	Thr	Gly	Val 85	Arg	Gln	Gly	Asp	Glu 90	Val	Ser	Val	His	Tyr 95	Asp
Pro	Met	Ile	Ala 100	Lys	Trp	Val	Val	Trp 105	Ala	Ala	Asp	Arg	Gln 110	Ala	Ala
Leu	Thr	Lys 115	Leu	Arg	Tyr	Ser	Leu 120	Arg	Gln	Tyr	Asn	Ile 125	Val	Gly	Leu
Pro	Thr 130	Asn	Ile	Asp	Phe	Leu 135	Leu	Asn	Leu	Ser	Gly 140	His	Pro	Glu	Phe
Glu 145	Ala	Gly	Asn	Val	His 150	Thr	Asp	Phe	Ile	Pro 155	Gln	His	His	Lys	Gln 160
Leu	Leu	Leu	Ser	Arg 165	Lys	Ala	Ala	Ala	Lys 170	Glu	Ser	Leu	Cys	Gln 175	Ala
Ala	Leu	Gly	Leu 180	Ile	Leu	Lys	Glu	Lys 185	Ala	Met	Thr	Asp	Thr 190	Phe	Thr
Leu	Gln	Ala 195	His	Asp	Gln	Phe	Ser 200	Pro	Phe	Ser	Ser	Ser 205	Ser	Gly	Arg
Arg	Leu 210	Asn	Ile	Ser	Tyr	Thr 215	Arg	Asn	Met	Thr	Leu 220	Lys	Asp	Gly	Lys
Asn 225	Asn	Val	Ala	Ile	Ala 230	Val	Thr	Tyr	Asn	His 235	Asp	Gly	Ser	Tyr	Ser 240
Met	Gln	Ile	Glu	Asp 245	Lys	Thr	Phe	Gln	Val 250	Leu	Gly	Asn	Leu	Tyr 255	Ser
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Gly	Ser	Ile	Glu 20		Asp) Ile	Pro	Val 25		Lys	Tyr	Leu	Ser 30		Val
Ser	Ser	Glr 35		Thr	Glr	ı Gly	Gly		Leu	ı Ala	Pro	Met 45		: Gly	Thr
Ile	Glu 50	-	s Val	. Phe	e Val	L Lys		Gly	Asp	Lys	val 60	_	s Ala	a Gly	Asp
Ser 65		ı Met	. Val	. Met	: Ile		a Met	Lys	. Met	: Glu 75		s Thr	: Ile	e Lys	Ser 80

Pro Lys Asp Gly Thr Val Lys Lys Val Phe Tyr Arg Glu Gly Ala Gln 85 Thr Pro Leu Val Glu Phe Glu Glu Glu Asp Ser His Asn Arg 110 105 100 Glu Ser Glu Arg Lys 115

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Ser

Val

<210> 232

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<213> homo sapiens

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			100					105					110		-
Glu	Gln	Glu 115	Asn	Trp	His	Glu	Gly 120	Lys	Glu	Asn	Ile	Arg 125	Ala	Ala	Val
Ala	Ala 130	Gly	Cys	Arg	Gln	Ile 135	Gln	Asp	Leu	Glu	Leu 140	Ser	Ser	Val	Glu
Val 145	Asp	Pro	Cys	Gly	Asp 150	Ala	Gln	Ala	Ala	Ala 155	Glu	Gly	Ala	Val	Leu 160
Gly	Leu	Tyr	Glu	Tyr 165	Asp	Asp	Leu	Lys	Gln 170	Lys	Lys	Lys	Met	Ala 175	Val
Ser	Ala	Lys	Leu 180	Tyr	Gly	Ser	Gly	Asp 185	Gln	Glu	Ala	Trp	Gln 190	Lys	Gly
Val	Leu	Phe 195	Ala	Ser	Gly	Gln	Glu 200	Leu	Gly	His	Ala	Asn 205	Leu	Met	Gly
Asp	Ala 210	Ser	Gln	Leu	Arg	Leu 215	Thr	Pro	Thr	Arg	Phe 220	Cys	Arg	Asn	Tyr
Leu 225	Arg	Arg	Phe	Ser	Lys 230	Leu	Val	Val	Ser						
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Ala	Ser	Ile	Ser 20	Ile	Gly	Trp	Arg	Leu 25	Pro	Ser	Asn	Trp	Arg 30	Ala	Gln
Val	Leu	Ala 35	Gln	Lys	Gln	Thr	Gly 40		Leu	Ser	Ala	Arg 45	Pro	Pro	Asp
Pro	His 50	Phe	His	Arg	Ala	Leu 55	Pro	Thr	Gln	Pro	Ser 60	Ser	Phe	Phe	Ala
Leu 65	Gly	His	Arg	Ile	His 70	Arg	Asp	Gln	Ala	Pro 75	Leu	Pro	Pro	Gln	Gln 80
Pro	Glu	Arg	Leu	His 85	Arg	Asp	Pro	Pro	Pro 90	Gln	Thr	Arg	Ala	Pro 95	Gly
Leu	Glu	Ser	Ala 100	Cys	Thr	Pro	Leu	Gln 105	Gln	Gln	Leu				
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Pro	Phe	Cys	Arg 20	Gly	Gln	Leu	Ala	Pro 25	Arg	Trp	Gly	Ser	Pro 30	Asp	Ala ·	
Asp	His	Lys 35	Arg	Phe	Glu	Ser	Ser 40	Leu	Pro	Ser	Glu	Val 45	Val	Gln	Ile	
Cys	Ser 50	Lys	Ser	Leu	Ser	Ala 55	Phe	Gln	Leu	Thr	Ile 60	Tyr	Gln	Asn	Ser	
Leu 65	Leu	His	Leu													
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Gln 1	Arg	Val	Arg	Ala 5	Ala	Leu	Leu	Ser	Ser 10	Ala	Met	Glu	Asp	Ser 15	Glu	

Asp Pro Arg Leu Leu Gln Ala Leu Gly Phe Glu His Met Gly Leu Ala 20 Glu Lys Ala Gln Ile Pro Thr Leu Gly Trp Ser Arg Asp Leu Val Thr 45 40 35 Thr Ala Arg Ala Arg Leu Leu Glu Gly Lys Asp Ala Leu Leu Ile Pro 60 55 50 Gln Leu Leu Met Leu Ile Pro Tyr Ala Thr Ala Ala Gly Lys Ser Gly 80 75 70 65 Gly Val Arg Val Glu Gln Ala Gly Pro Val Arg Ala Thr Lys 90 85 Met Ala Gln Ser Gln Ala Arg Glu Leu Thr Lys Val Pro Val Leu 110 105 100 Ala Val Arg Val Arg Asp Tyr ·Cys Ala Leu Ala Thr Gln 125 120 115 Glu Leu Met Ala Val Gln Arg Ser Val Ser Glu Asp Ala Ala Val Ser 140 135 130 Leu His Arg Ile Leu Ser Ser Val Gly Thr Pro Val Val Lys Pro Asp 160 155 150 145 Leu Val Val Glu Leu Leu Ser Leu Arg Asp Lys Gln Ser Leu Gln Asp 175 170 165 Trp Leu Leu Leu Phe Ser Leu Asp Asp Glu Ala 185 180

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<211> 76

<212> PRT

<213> homo sapiens

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Lys	Ala	Ser 35	His	Cys	Leu	Phe	Tyr 40	His	Arg	Thr	Cys	Arg 45	Leu	Pro	Met
Glu	Gln 50	Gln	Leu	Gln	His	Arg 55	Asn	Ser	Ile	Ser	Gly 60	Arg	Leu	Pro	Gly
Ala 65	Arg	Ala	Gly	Pro	Ser 70	Gln	Glu	Val	Leu	Pro 75	Phe				
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Lys	Val	Ala	Asp 20	Met	Arg	Lys	Ala	Leu 25	Leu	Lys	Ser	Gly	Gly 30	Lys	Val
Thr	Arg	Gly 35	Arg	Leu	Leu	Glu	Leu 40	Phe	Phe	Lys	Ala	Lys 45	Gly	Lys	Lys
Glu	Gly 50	Gln	Leu	Arg	Pro	Pro 55	Pro	Lys	Ala	Pro	Gly 60	Ser	His	Glu	Val
Ser 65	-	Cys	Leu	Ala	Ala 70	Ser	Gly	Leu	Ile	Cys 75	Glu	Met	Gly	Ser	Leu 80
Leu		His	Leu	Ala 85	Ser	Pro	Ser	Ala	Gln 90	Leu	Ser	Glu	Arg	Leu 95	Ser
Leu	Gln	Gln	Leu 100	Arg	His	Trp	Pro	Leu 105	Gly	His	Pro	Glu	His 110	Ser	Arg
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Lev	ı Met	Val	Leu 20		Leu	Ala	Ala	Leu 25	Leu	Leu	His	Cys	Tyr 30		Asp
Sei	c Gly	Cys	_	Leu	Leu	Glu	Asp 40		Val	Glu	Lys	Thr 45		. Asn	Ser
Ası	o Ile		: Ile	e Pro	Glu	. Tyr 55	_	Glu	Leu	. Leu	Gln 60		ı Phe	e Ile	Asp
Se	r As <u>r</u>	Ala	a Ala	a Ala	Glu	Ala	a Met	. Gly	Lys	: Phe	Lys	Glr	n Cys	Phe	Leu

65					70					75					80
Asn	Gln	Ser	His	Arg 85	Thr	Leu	Lys	Asn	Phe 90	Gly	Leu	Met	Met	His 95	Thr
Val	Tyr	Asp	Ser 100	Ile	Trp	Cys	Asn	Met 105	Lys	Ser	Asn				
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Ile	Thr	Val	Tyr 20	Glu	Leu	Leu	Lys	Lys 25	Leu	Phe	Val	Phe	Arg 30	Tyr	Arg
Tyr	Val	Gly 35	Ile	Asp	Gly	Leu	Phe 40	Asn	His	Val	Leu	Gln 45	Glu	Phe	Ala
Ala	Arg 50	Ile	Cys	Ile	Ala	Val 55	Gln	Glu	Glu	Gly	Arg 60	Gln	His	Glu	Asp
His 65	Gln	Gln	Leu	His	Gly 70	Glu	Ala	Ala	Ala	Val 75	Cys	Val	Gln	Ser	Cys 80
Val	Ala														
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Ser	Pro	Lys	Phe 20	Phe	Arg	Val	Leu	Cys 25	Asp	Trp	Leu	Arg	30	His	Cys
Leu	Asn	Phe 35		Ile	Ala	Ser	Ala 40	Ala	Ala	Ser	Leu	Ser 45	Met	Asn	Ser
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Asp	Arg	Cys	Phe 20	Pro	His	Phe	Ser	Phe 25	Ser	Pro	Lys	Lys	Val 30	Leu	Leu
Leu	Ser	Pro 35	Phe	Lys	Gln	Pro	Val 40	Ser	Leu	Asn	Phe	Cys 45	Gly	His	Gly

Thr	Asp 50	Lys	Asp	Pro	Val	Phe 55	Ser								
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Arg	Lys	Ser	Pro 20	Ala	Thr	Ser	Leu	Ala 25	Ile	Lys	Leu	Gln	Pro 30	Ser	His
Pro	Thr	Arg 35	Ala	Ser	Glu	Glu	Trp 40	Pro	Leu	Leu	Ala	Gly 45	Asn	Pro	Leu
Gln	Trp 50	Ala	Ser												
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Ser	Leu	Ser	Val 20	Pro	Trp	Pro	Gln	Lys 25	Phe	Arg	Leu	Thr	Gly 30	Cys	Leu
Lys	Gly	Asp 35	Arg	Ser	Arg	Thr	Phe 40	Leu	Gly	Glu	Lys	Glu 45	Lys	Trp	Gly
Lys	Gln 50	_	Ser	Ser	Ile	Arg 55	Ser	Glu	Ser	Leu	Leu 60	Glu	Ser	Phe	Ser
Pro 65		Ala													
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Thr	Ser	Leu	Leu 20	Phe	Ala	Gln	Ser	Cys 25	Arg	Ser	Met	Tyr	Phe 30	Leu	Leu
Glr	ı Tyr	. Val 35	Pro	Ile	Tyr	Lys	Phe 40	Ile	Ser	His	Thr	Tyr 45	Asn	Arg	Ala
His	val	_	Thr	Cys	Thr	Arg 55		His	Thr	His	Ser 60	Leu	Ser	Thr	Arg

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Gly 65	Phe	Tyr	Lys	Tyr	Ser 70	Asn	Met	Glu	Phe	Val 75	Arg	Met	Lys	Gly	Pro · 80
Gln	Gly	Lys	Gly	His 85	Ala	Glu	Met	Ala	Val 90	Ser	Arg	Val	Ser	Thr 95	Gly
Asp	Thr	Ala	Pro 100	Cys	Gly	Thr	Glu	Glu 105	Asp	Ser	Ser	Pro	Ala 110	Ser	Pro
Met	His	Glu 115	Arg	Val	Thr	Ser	Phe 120	Ser	Arg	Pro	Pro	Thr 125	Pro	Glu	Arg
Asn	Asn 130	Arg	Pro	Ala	Phe	Phe 135	Ser	Pro	Ser	Leu	Lys 140	Arg	Lys	Val	Pro
Arg 145	Asn	Arg	Ile	Ala	Glu 150	Met	Lys	Lys	Ser	His 155	Ser	Ala	Asn	Asp	Ser 160
Glu	Glu	Phe	Phe	Arg 165	Glu	Asp	Asp	Gly	Gly 170	Ala	Asp	Leu	His	Asn 175	Ala
Thr	Asn	Leu	Arg 180	Ser	Arg	Ser	Leu	Ser 185	Gly	Thr	Gly	Arg	Ser 190	Leu	Val
Gly	Ser	Trp 195	Leu	Lys	Leu	Asn	Arg 200	Ala	Asp	Gly	Asn	Phe 205	Leu	Leu	Tyr
Ala	His 210	Leu	Thr	Tyr	Val	Thr 215	Leu	Pro	Leu	His	Arg 220	Ile	Leu	Thr	Asp
Ile 225	Leu	Glu	Val	Arg	Gln 230	Lys	Pro	Ile	Leu	Met 235	Thr				
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Gly	Arg	Arg	Trp 20	Ser	Arg	Ser	Ala	Gln 25	Cys	Asn	Gln	Pro	Ala 30	Val	Ser
Val	Pro	Val 35	Gly	His	Arg	Thr	Val 40	Pro	Gly	Arg	Val	Leu 45	Ala	Glu	Ala
Glu	Gln 50	Ser	Arg	Trp	Lys	Leu 55	Pro	Ser	Leu	Càa	Thr 60	Leu	Asn	Leu	Arg
His 65	Val	Ala	Ala	Ala	Ser 70	Asp	Phe	Asn	Arg	His 75	Pro	Gly	Ser	Ser	Ala 80
Glu	Ala	His	Pro	Asp 85	Asp	Leu	Ala	Ala	Суs 90	Gly	Ala	Cys	Ala	Glu 95	Pro
Arg	Pro	Gly	Pro 100	Ala	Leu	Gly	Val	Leu 105	Pro	Ser	Ala	Tyr	Leu 110	Ser	Thr
Ala	Thr	Gly	Val	Cys	Asp	Gly	Thr	Pro	Val	Leu	Glu	Pro	Gln	Pro	Gly

		115					120					125			_
Glu	Ala 130	Thr	Arg	Leu	Pro	Gly 135	Pro	Gly	Pro	Thr	Ala 140	Arg	Thr	Pro	Ala
Gln 145	Thr	Glu	Val	Pro	Leu 150	Thr	Gly	Pro	Ala	Gly 155	Ala	Ala	Ser	Ala	Leu 160
Cys															
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Gly	Pro	Asp	Gln 20	Gly	Pro	Ser	Cys	Ala 25	Arg	Gln	Gly	Pro	Arg 30	Pro	Gln
Val	Gly	Cys 35	Ile	Val	Gln	Ile	Gly 40	Ser	Thr	Val	Val	Leu 45	Pro	Glu	Glu
Leu	Leu 50	Ala	Val	Val	Gly	Arg 55	Val	Arg	Leu	Leu	His 60	Leu	Ser	Asp	Pro
Val 65	Pro	Gly	His	Leu	Pro 70	Leu	Glu	Gly	Trp	Gly 75	Glu	Glu	Gly	Arg	Pro 80
Val	Val	Pro	Phe	Trp 85	Gly	Gly	Gly	Ser	Ala 90	Glu	Gly	Gly	His	Pro 95	Leu
Val	His	Gly	Arg 100	Ser	Trp	Ala	Gly	Val 105	Leu	Phe	Ser	Pro	Thr 110	Gly	Gly
Cys	Val	Thr 115	Cys	Arg	His	Ser	Ala 120	Asp	Arg	His	Leu	Gly 125	Val	Ala	Leu
Ala	Leu 130	Gly	Ala	Leu	His	Ala 135	·His	Lys	Leu	His	Val 140	Ala	Val	Leu	Val
Glu 145	Ala	Lys	Arg	His	Leu 150	Leu	Cys	His	Ala	Gly 155	Gly	His	Ala	His	Pro 160
Val	Val	Ile	His	Leu 165	Leu	Glu	Arg	Leu	Val 170	Ala	Asp	Gly	Ala	Leu 175	Lys
Asp	Asp	Pro	Leu 180	Glu	Arg	Val	Gly	Phe 185	Val	Thr	Ser	His	Gln 190	Leu	His
Thr	Asp	His 195	Leu	Ser	Phe	Pro	Thr 200	Val	Met	Ser	Leu	Asn 205	Thr	Ser	Ser
Lys	Leu 210	Ser	Ile	Met	Lys	Lys 215	Met	Leu	Gly						
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Leu	Glu	Leu	Cys 20	Pro	Gly	Glu	Lys	Thr 25	Ala	Pro	Val	Trp	Ala 30	Leu	Ser
Ala	Glu	Glu 35	Glu	Ala	Ala	Met	His 40	Phe	Ser	Leu	Ala	Phe 45	Phe	Leu	His
Gly	Ser 50	Ser	Val	Phe	Leu	Gln 55	Ile	Thr	Cys	Cys	His 60	Glu	Phe	Leu	Cys
Met 65	Arg	His	Ile	Ser	Ser 70	Cys	Leu	Tyr	Ala	Glu 75	Val	Pro	Phe	Ile	Leu 80
Ser	Ile	Gly	Trp	Trp 85	Thr	Gly	Glu	Arg	Gly 90	Pro	Arg	Cys	Pro	Thr 95	Ser
Cys	Ala	Ser	Ala 100	Val	Gly	Gly	Asp	Arg 105	Ala	Pro	Arg	His	Gly 110	Gly	Gly
Gly	His	Leu 115	Pro	His	Val	Trp	Gly 120	Gly	Arg	Arg	His	Pro 125	Gly	Thr	Glu
Gly	Ser 130	Leu	Gln	Arg											
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Arg	Cys	Pro	Pro 20	Pro	Pro	Cys	Leu	Gly 25	Ala	Arg	Ser	Pro	Pro 30	Thr	Ala
Leu	Ala	His 35	Asp	Val	Gly	His	Leu 40	Gly	Pro	Leu	Ser	Pro 45	Val	His	Gln
Pro	Ile 50		Arg	Met	Lys	Gly 55	Thr	Ser	Ala	Tyr	Arg 60	His	Asp	Glu	Ile
Cys 65	Leu	Met	His	Lys	Asn 70	Ser									
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Arg	_	Leu	. Gln	His 5		Asp	Met	Met	Lys 10		Ala	Ser	Cys	Ile 15	Lys
Ile	His	Asp) Asn	Met	Leu	Phe	. Ala	Lys	Lys	Gln	Thr	Asn	His	Ala	Gly

30 25 20 Gly Gln His Ser Pro Pro Gln Leu Ser Ala Trp Pro Gly Lys Met Lys 45 40 35 Pro Pro Ser Arg Asp Thr Ala Gln Ser Pro Phe Thr Gln Glu Arg Pro 60 55 50 Ala Glu Gly Ile Arg Gly Pro Pro Leu Leu Ala Val Met Glu Ala Ser 80 65 His Gln Thr His Ser Met Asp Ala Ala Val Thr Leu Leu 95 90 85 <210> 253 <211> 194 <212> PRT <213> homo sapiens <400> 253 Ile Ile Leu Val Ile Ser Phe Arg Lys Val Asn Met Gln Lys Lys Lys 15 10 Phe Leu Ser His Asn Val Leu His Leu Phe Leu Leu Ala Val Ala Leu 30 20 Gly Ile Val Gly Val Thr Asp Ser Glu Arg Asn Leu Leu Ser Ser Leu 45 40 35 Val Asp Ala His Ala Leu Arg Val Pro Asn Phe Ile Asp Gln Pro Pro 60 55 50 Arg Glu Asp Ala Ser Ile Ala Val Val Glu Ile Pro Gln Glu Gly Arg 75 70 65 Thr Arq Asn Ser Ile Gln His Asn Ile Ala Ala Ile Gly Gly Ala Leu 95 90 85 His Thr Ala Asp Thr Asn Asn Leu Tyr Ile Val Ile Phe Ser Asn Val 110 105 100 Lys Tyr Ile Arg Ser Leu Lys Ser Trp Asn Ser Asp Leu Ser Leu Arg 125 120 115 Lys Glu Asp Gly Lys Val Glu Asp Pro Lys Leu Leu Phe Ile Val Asn 130 135 Tyr Phe Phe Ala Arg Thr Leu Met Lys Pro Gly Glu Ser Pro Asp Gln 160 155 150 145 His Gly Ala Arg Lys Arg Gly Ser Gln Arg Gln Pro Ile Leu Leu 175 170 165 Thr Phe Leu Pro Phe Leu Asp Trp Ile Cys Gly Arg Asp Val Val Asp 190 185 180 Gln Gln

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Gln	Lys	Phe	Arg 20	Val	Lys	Ile	Asp	Asn 25	Phe	Val	Ser	Asp	Ala 30	Phe	Gln
Gly	Ile	Thr 35	Val	Glu	Pro	Gly	Pro 40	Glu	Met	Val	Суз	Cys 45	Ile	Val	Glu
Ser	Asn 50	Asn	Val	Glu	Asn	His 55	Ile	Gly	Ala	Ser	Val 60	Val	Leu	Asn	Ala
Val 65	Tyr	Ser	Cys	Asn	Gly 70	Pro	Pro	Lys	Pro	Val 75	Phe	Arg	Cys	Ser	Asp 80
Asp	His	Arg	Asn	Leu 85	Leu	Leu	Ser	Pro	Ile 90	Tyr	Cys	Met	Ser	Glu 95	Ser
Ile	Trp	Asp	Lys 100	Val	Tyr	Arg	Leu	Arg 105	Pro	Tyr	Asn	Ser			
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Ser	Phe	Thr	Phe 20	Pro	Ser	Lys	Ser	Leu 25	Gly		Lys	Leu	Thr 30	Ile	Leu
Tyr	Leu	Met 35	Leu	Phe	Arg	Glu	Ser 40	Leu	Leu	Ser	Gln	Asp 45	Arg	Arg	Trp
Ser	Ala 50		Leu	Leu	Arg	Val 55	Thr	Met							
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Gly	Ser	Ser	Ser 20	_	Asn	His	g Gly	Gly 25		Gly	Gly	Gly	30)	
Lys	Pro	Gly 35		Glu	Lys	Pro	Gly 40		. Glu	ı Ala	Arg	Gly 45		Gly	Lys
Ser	Gly)				5	5			y Val	60	!			_
Glu	ı Ile	e Sei	. Lys	s Glu	. Gly	, Ası	n Arg	j Lev	ı Let	ı Gly	Gly	Ser	Gly	/ Asp) Asn

65					70					75					80 .
Tyr	Arg	Gly	Gln	Gly 85	Ser	Ser	Trp	Gly	Ser 90	Gly	Gly	Gly	Asp	Ala 95	Val
Gly	Gly	Val	Asn 100	Thr	Val	Asn	Ser	Glu 105	Thr	Ser	Pro	Gly	Met 110	Phe	Asn
Phe	Asp	Thr 115	Phe	Trp	Lys	Asn	Phe 120	Lys	Ser	Lys	Leu	Gly 125	Phe	Ile	Asn
Trp	Asp 130	Ala	Ile	Asn	Lys	Asn 135	Gln	Val	Pro	Pro	Pro 140	Ser	Thr	Arg	Ala
Leu 145	Leu	Tyr	Phe	Ser	Arg 150	Leu	Trp	Glu	Asp	Phe 155	Lys	Gln	Asn	Thr	Pro 160
Phe	Leu	Asn	Trp	Lys 165	Ala	Ile	Ile	Glu	Gly 170	Ala	Asp	Ala	Ser	Ser 175	Leu
Gln	Lys	Arg	Ala 180	Gly	Arg	Ala	Glu	Ser 185	Glu	Leu	Gln	Leu	Gln 190	Pro	Ala
Cys	Val	Ser 195	His	Cys	Leu	Trp	Trp 200	Glu	Val	Leu	Ser	Gln 205	Asp	Pro	Cys
Lys	Gly 210	Gly	Glu	Ser	His	Leu 215	Leu	Pro	Arg	Leu	Pro 220,		Cys	Asn	Leu
Gly 225	Leu	Leu	Ala	Val	Gly 230										
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Ala	Asp	Ser	Gly 20	Arg	Ile	Ser	Asn	Arg 25	Thr	Leu	Leu	Ser	Ser 30	Thr	Gly
Lys	Gln	Leu 35		Arg	Val	Arg	Thr 40	_	His	His	Cys	Arg 45	Asn	Val	Gln
Ala	Glu 50		ser	Gln	Asn	Tyr 55		Tyr	Asn	Gln	His 60		Tyr	Pro	Thr
Ala 65	-	Gly	gly	Lys	Tyr 70		. Val	Lys	Thr	Pro 75		Lys	Gly	Gly	Ser 80
Leu	Thr	Phe	e Phe	e Leu 85	_	Phe	e Pro	Gly	Ala 90		Trp) Ala	Cys	Leu 95	Gln
Leu	. Gly	r Glı	ı Va]		ı Val	. Arg	g Glr	n Phe 105		ı Ala	t Thr	. Asn	His	_	Arg
Pro	Ar <u>c</u>	J Lys 11!		s His	; Trp	o Val	l Arg 120	_	ı Gly	y Lys	s Leu	1 Leu 125		Pro	Leu

Gly	Pro 130	Pro	Ala	Leu	Trp	Gln 135	Ala	Pro	Gly	Pro	Gly 140	Leu			
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Ala	Gly	Gly 35	Arg	Asp	Leu	Val	Leu 40	Val	Tyr	Gly	Ile	Pro 45	Val	Asp	Glu
Thr	Gln 50	Leu	Gly	Phe	Lys	Ile 55	Leu	Pro	Glu	Ser	Val 60	Lys	Val	Lys	His
Pro 65	Arg	Arg	Arg	Leu	Arg 70	Val	His	Ser	Ile	Asp 75	Ser	Thr	Asn	Ser	Val 80
Thr	Ser	Ser	Thr	Ala 85	Pro	Ala	Arg	Pro	Leu 90	Pro	Pro	Ile	Ile	Val 95	Ser
Arg	Ala	Ser	Lys 100	Glu	Ala	Ile	Ala	Leu 105	Phe	Ala	Tyr	Phe	Pro 110	His	Val
Ala	Gly	Asn 115	Ser	Leu	Ser	Ser	Glu 120	Ala	Leu	Asn	Pro	Arg 125	Phe	Pro	Ala
Pro	Ala 130	Gly	Phe	Ile	Pro	Trp 135	Leu	Phe	Thr	Pro	Gly 140	Phe	Met	Ser	Ile
Ser 145	Ser	Ala	Ala	Pro	Thr 150	Val	Val	Ala	Gly	Gly 155	Gly	Ala	Gly	Ala	Gly 160
Ser	Leu	Pro	Pro	Leu 165			•								
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Lev	ı Thi	r Phe		Arg	Lys	s Lys	Lys		Thi	Pro) Lys	val 45		Tyr	Glu
Ile	e Pro	_	o Thr	туг	: Ala	a Glr 5!		c Glu	ı Gly	y As <u>r</u>	Ala 60		n Pro	Pro	Arg
Pro	o As	p Ala	a Gly	r Gly	, Pro	o Ası	n Sei	c Ası	p Phe	e Ası	n Thi	. Arg	J Leu	Glu	. Lys

					70					75					80
65												*** 1	Com	λan	Ser
Ile	Val	Asp	Lys	Ser 85	Thr	Lys	Gly	Lys	His 90	Val	Lys	Val	Ser	Asn 95	Ser
Gly	Arg	Phe	Lys 100	Glu	Lys	Lys	Lys	Val 105	Arg	Ala	Thr	Leu	Ala 110	Glu	Asn
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His	Pro	Leu	Pro 20	Arg	Phe	Gly	Pro	Cys 25	Ser	Phe	Pro	Leu	Arg 30	Val	Cys
Asp	Leu	Pro 35	Ser	Ala	Lys	Val	Met 40	Ala	Lys	Thr	Gly	Thr 45	Asn	Arg	Pro
Asn	Tyr 50	His	Gln	Ser	Ser	Leu 55	Leu	Gln	His	Pro	Asn 60	Arg	Val	Pro	Gly
Ser 65		Val	Pro	Ser	Ala 70	Pro	Glu	Gly	Lys	Val 75	Pro	Gly	Ser	Leu	Leu 80
Pro	Val	Leu	Gly	Gly 85	Glu	Leu	Lys	Phe	Ser 90	Val	Ser	Ala	Ser	Gly 95	Ser
Thr	Glu	Thr	Ser 100	Pro	Tyr	His	Val	Ala 105	Ser	Gly	Lys	Cys	Ala 110	Leu	Leu
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II.	e Sei	c Glr	n Ala 20		Gln	Lys	Trp	Arg		: Ile	. Asn	Thr	Asn 30		Lys
As	n Sei	r His		. Leu	Pro	Ala	Gly 40		e Asr	ı Trp) Pro	His		Phe	Ser
Ту	r Gl	-	n Arg	g Gly	Gln	Arg	_	y Lys	s Val	l Lev	ı Ser 60		ı Ile	e Trp	Leu
Me 6	t Al	a Gl	y Ser	r Gln	Glu 70	ı Val	L Le	ı Ala	a Pro	o Sei 75		: Ala	a Lev	ı His	Phe 80

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Ile	Phe	Leu 35	Thr	Asp	Phe	Glu	Ala 40	Val	Cys	Leu	His	Ser 45	Asp	Trp	Glu
His	Trp 50	Asp	His	Phe	His	His 55	Ala	Asp	Ser	Gly	Gly 60	Asn	Gly	Cys	Ile
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His	Gly	Lys 35	Gly	Tyr	Ile	His	40	His	His	Cys	Arg	His 45	Asp	Glu	Asn
Asp	Pro		Val	Pro	Asn	Gln 55	Asn	Ala	Asn	Arg	Gln 60	Leu	Gln	Asn	Gln
Ser 65	_	Lys	Cys	Gly	Ile 70	Trp	Lys	Ser	Leu	Leu 75	Glu	Arg	Gly	Gly	Arg 80
Gly	Glu	Leu	Ser	Arg 85	Gly	Arg	Asn	Arg	Ala 90	Val	Tyr	Ala	Glu	Leu 95	Gly
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Ile	Pro	Val 35	Phe	Pro	Ile	Arg	Met 40	Gln	Thr	Asp	Ser	Phe 45	Lys	Ile	Ser
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Ser	Arg	Ser 35	Arg	Arg	Arg	Ala	Ala 40	His	Ser	Arg	Cys	Cys 45	Val	Ala	Phe
Pro	Ser 50	Ser	Phe	Thr	Pro	Arg 55	Ser	Arg	Arg	Arg	Pro 60	Lys	Arg	Arg	Arg
Arg 65		Arg	Glu	Asn	Asp 70	Pro	Ala	Ala	Ser	Ser 75	Leu	Pro	Pro	Ala	His 80
Leu	Pro	Cys	Ser	Val 85	Ser	Gln	Ser	Ala	Ala 90	Gly	Ala	Arg	Leu	Val 95	Leu
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Pro	o Arg	g Gly	Gly 20		Arg	Leu	ı Val	Leu 25		: Leu	Ala	Ala	Glu 30		Lys
Va:	l Asp	Arg		Gly	Gly	Leu	His		e Pro	o Val	Val	Ala 45		Arg	y Phe
Le	u Pro		ı Ser	Leu	ı Arg	Ala 55		s Gly	y Gly	y Gly	Gln 60		: Gly	, Gl	y Asp
Gl 6	y Gly 5	y Alá	a Arg	g Thr	Thr.		g Arg	g Pro	o Vai	l Leu 75		. Lev	ı Lev	ı Arg	Thr 80

Pro Ala Pro Gly Leu Cys Ser Pro Ala Arg Ser Val Ser Arg Arg 90 Ser Gly Arg Ser Leu Ala Ala Pro Arg Pro Asp Leu Ala 105 100 <210> 267 <211> 157 <212> PRT <213> homo sapiens <400> 267 Leu Arg Cys Val Ser Phe Thr Phe Pro Leu Ile Glu Ala Ala Gly Cys 15 Thr Ala Ala Ala Ala Lys Ala Ala Ala Thr Phe His Ser Ala Leu Leu 30 25 20 Pro Ala Cys Ala Ser Ser Phe Ser Gly Gly Gln Pro Arg Glu Arg Ala 45 40 35 Thr Pro Ala Cys Ala Gln Gly Arg Arg Val Gly Gln Ser Leu Gly Leu 50 Val Trp Pro Val Ala Ser Ala Ala Pro Gly Pro Arg Leu Arg Arg 80 75 65 Ala Glu Pro Arg Arg Ala Ala Pro Pro Ala Ala Arg Leu Gly Glu Asn 95 90 85 Gly Trp Pro Glu Glu Ser Gly Arg Arg Val Ser Arg Gly Ser Ser 105 100 Lys Gly Ser Val Pro Ser Arg Trp Ser Pro Arg Val Ala Gly Gln Val 120 115 Ala Thr Ser Ser Ala Pro Ala Arg Thr Ser Arg Ser Thr Thr Trp Pro 140 135 130 Lys Arg Leu Pro Arg Glu Met Pro Pro Arg Arg Pro Arg 155 150 145 <210> 268 <211> 156 <212> PRT <213> homo sapiens <400> 268 Gly Arg Arg Leu Leu Arg Ala Gln Gly Glu Glu Pro Gly Pro Ser Ser 15 1 Val Ala Gly Phe Ser Glu Gly Lys Ser Met Glu Ser Arg Ala Thr Pro Gly Gly Gln Leu Ser Pro Gln Tyr Met Lys Glu Ser Pro Thr Met Arg 40 35 Ala Phe Asp His Thr Leu Leu Met Phe Met Leu Val Leu Leu Val Arg 60 55 50

Phe Ser Ile Val Gln Asn Ile Val

Phe

Ser

Leu Met

Gly

Thr Ala

										75					80
65					70										
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Val	Trp	Leu	Phe 100	Ala	Ile	Asn	Val	Tyr 105	Phe	Asn	Ala	Phe	Trp 110	Thr	Ile
Pro	Val	Tyr 115	Lys	Pro	Met	His	Asp 120	Phe	Leu	Lys	Tyr	Asp 125	Phe	Phe	Gln
Thr	Met 130	Ser	Val	Ile	Gly	Gly 135	Leu	Leu	Leu	Val	Val 140	Ala	Leu	Gly	Pro
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Trp	Leu	Arg 35	Pro	Val	Ala	Val	Lys 40	Asp	Trp	Phe	Gly	Val 45	Asp	Ser	Thr
Lys	Leu 50	Pro	Ala	Phe	Met	Tyr 55	Pro	Leu	Pro	Phe	Pro 60	Ser	Leu	Gly	Lys
Gly 65	Thr	Asp	Val	Leu	Arg 70	Thr	Leu	Phe	Ala	Glu 75	Thr	Pro	Glu	Asn	Arg 80
Trp	Leu	Ser	Leu	Leu 85	Trp	Ser	His	Ser	Leu 90	Ala	Ser	Asp	Pro	Ser 95	Val
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Ser	Cys	Asp 35	His	Ser	Ser	Ala	His 40	Cys	Met	Lys	Thr	Gly 45	Leu	Ser	Gln
Сув	Phe 50		Leu	Thr	Arg	Ala 55	Val	Ser	Trp	Ser	Thr 60	Pro	Arg	Ser	Leu

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Leu 65	Val	Pro	Tyr	Asp	Ser 70	PIO	His	GIII	Mec	75	пец	AIG	175	001	80
Phe	Leu	Cys	Gly	Gln 85	Gly	Trp	Leu	Ala	Asp 90	Trp	Trp	Lys	Val	Gly 95	Trp
Thr	Lys	Gly	Gly 100	His	Val	Ser	Ser	Gln 105	His	Gln	Phe	Cys	Thr 110	Ser	Ser
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Gln	Gly	Glu 35	Ser	Val	Leu	Lys	Glu 40	Pro	Lys	Tyr	Gln	Glu 45	Glu	Leu	Glu
Asp	Arg 50	Leu	His	Phe	Tyr	Val 55	Glu	Glu	Cys	Asp	Tyr 60	Leu	Gln	Gly	Phe
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Ile	Tyr	Arg 115	Leu	Leu	Asn	Thr	Ala 120	Phe	Gly	Leu	Val	His 125	Leu	Thr	Ala
His	Ser 130	Ser	Leu	Val	Cys	Pro 135	Leu	Ser	Leu	Gly	Gly 140	Ser	Leu	Gly	Leu
Arg 145		Glu	Pro	Pro	Val 150	Ser	Phe	Pro	Tyr	Leu 155	His	Tyr	Asp	Ala	Thr 160
Leu	Pro	Phe	His	Cys 165	Ser	Ala	Ile	Leu	Ala 170	Thr	Ala	Leu	Asp	Thr 175	Val
Thr	· Val	Pro	Tyr 180	Arg	Leu	Cys	Ser	Ser 185		Val	Ser	Met	Val 190	His	Leu
Ala	Asp	Met 195	Leu	Ser	Phe	Cys	Gly 200	Lys	Lys	Val	Val	Thr 205		Gly	Ala
Ile	· Ile	Pro	Phe	Pro	Leu	Ala	Pro	Gly	Gln	Ser	Leu	Pro	Asp	Ser	Leu

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Leu	Ile	Asp 35	Asp	Arg	Cys	Phe	Ser 40	Gly	Pro	Pro	His	Asp 45	Gly	Arg	Asp
Gln	Val 50	Ala	Gly	Pro	Arg	Leu 55	Leu	Phe	Pro	Ala	Leu 60	Asn	Ile	His	Leu
Val 65	Ala	Ala	Leu	Pro	Pro 70	Ser	Arg	Leu	Pro	Gln 75	Arg	Ser	His	Arg	Ala 80
Gly	His	Thr	Gly	Ser 85	Gly	Ser	Pro	Ala	Ser 90	Ser	His	Ile	Pro	Pro 95	Arg
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Val	Arg	Glu	Ala 100	Asp	Arg	Trp	Leu	Gly 105	Ser	Gln	Ala	Gln	Ala 110	Pro	Thr
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Pro	Ala	Gly 35	Gly	Thr	Cys	His	His 40	Pro	Ala	Ala	Phe	Arg 45	Gly	Arg	Ser
Arg	His 50	Ile	Pro	Val	Pro	His 55	Ala	Leu	Gly	Phe	Gly 60	Ala	Ser	Ala	Gly
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Leu	Gln	Val	Phe	Ser 85	Thr	Gly	Ala	Ala	Pro 90	Val	Ile	His	Thr	Arg 95	Leu
Leu	Glu	Asp	Pro 100	Ile	Leu	Gly	Ala	Thr 105	Leu	Pro	Ala	Gly	Pro 110	Ile	Arg
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Arg	Asp	Ser 35	Leu	Arg	Glu	Glu	Leu 40	Val	Ile	Thr	Pro	Leu 45	Pro	Ser	Gly
Asp	Val 50	Ala	Ala	Thr	Phe	Gln 55	Phe	Arg	Thr	Arg	Trp 60	Asp	Ser	Glu	Leu

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Gln	Leu	Ile	Ser	Lys 85	Tyr	Ser	Leu	Arg	Glu 90	Leu	His	Leu	Ser	Phe 95	Thr
Gln	Gly	Phe	Trp 100	Arg	Thr	Arg	Tyr	Trp 105	Gly	Pro	Pro	Phe	Leu 110	Gln	Ala
Pro	Ser	Gly 115	Ala	Glu	Leu	Trp	Val 120	Trp	Phe	Gln	Asp	Thr 125	Val	Thr	Asp
Val	Asp 130	Lys	Ser	Trp	Lys	Glu 135	Leu	Ser	Asn	Val	Leu 140	Ser	Gly	Ile	Phe
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Ala	Ser	Phe	Lys	Pro 165	Leu	Gly	Leu	Ala	Asn 170	Asp	Thr	Asp	His	Tyr 175	Phe
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Thr	Pro	Trp 195	Lys	Lys	Leu	Leu	Pro 200	Cys	Ser	Ser	Lys	Ala 205	Gly	Leu	Ser
Val	Leu 210	Leu	Lys	Ala	Asp	Arg 215	Leu	Phe	His	Thr	Ser 220	Tyr	His	Ser	Gln
Ala 225	Val	His	Ile	Arg	Pro 230	Val	Cys	Arg	Asn	Ala 235	Arg	Cys	Thr	Ser	Ile 240
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Thr	Leu	Thr 275	Glu	Pro	Cys	Pro	Leu 280	Ala	Ser	Glu	Ser	Arg 285	Val	Tyr	Val
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Pro 305	Pro	Thr	Thr	Thr	Tyr 310	Gln	Asp	Val	Ile	Leu 315	Gly	Thr	Arg	Lys	Thr 320
Tyr	Ala	Ile	Tyr	Asp 325	Leu	Leu	Asp	Thr	Ala 330	Met	Ile	Asn	Asn	Ser 335	Arg
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Pro	Pro	Val 355	Pro	Phe	Leu	His	Ala 360	Gln	Arg	Tyr	Val	Ser 365	Gly	Tyr	Gly
Leu	Gln 370	Lys	Gly	Glu	Leu	Ser 375	Thr	Leu	Leu	Tyr	Asn 380	Thr	His	Pro	Tyr
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Ala

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Ile Ser Leu Leu Ser Lys Leu Arg Asn Glu Leu

Gln

Thr

Asp

			100					105					110		
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Tyr	Arg	Arg	Ile	His 165	Glu	Ala	Ile	Ile	Gln 170	Ser	Pro	Pro	Ile	Asp 175	Tyr
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Gly	Glu	Ser	Ser	Ser 245	Gln	Asn	Thr	Asn	Val 250	Leu	Asn	Ser	Leu	Glu 255	Asp
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Tyr	Ile 290	Val	Leu	Asp	Asn	Ser 295	Gly	Phe	Glu	Leu	Val 300	Thr	Asp	Leu	Ile
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Arg	Lys	Tr	Glu 420		Ser	Val	Pro	Phe 425	His	; Gln	Ala	Leu	Asn 430	Gly	Phe
His	Pro	Ala	a Pro	Leu	Cys	Thr	Ile	Arg	Thr	Leu	Lys	Ala	Glu	Ile	Gln

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Phe	Phe	Ser 35	Ala	Ser	Thr	Pro	Ser 40	Ser	Pro	Cys	Phe	Ser 45	Lys	Asn	Ser
Leu	Leu 50	Cys	Arg	Cys	Asn	Val 55	Ser	Ile	Thr	Leu	Val 60	Lys	Ile	Cys	Gly
Ile 65	Leu	Ser	Leu	Ile	Val 70	Arg	Tyr	Ala	Asn	Asp 75	Pro	Thr	Ser	Cys	Pro 80
Glu	Arg	Asp	Ala	Gly 85	Thr	Thr	Ala	Ile	Thr 90	Phe	Arg	Asp	Pro	Gly 95	Arg
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Ile	Phe	Gln	Trp 20	Ser	Thr	Ser	Trp	Ala 25	Gln	Arg	Pro	Gly	Ala 30	Val	Pro
Leu	Ala	Gln 35	Ala	Ala	Asp	Gln	Pro 40	Glu	Phe	Gln	Leu	Leu 45	Met	Phe	Leu
Trp	Tyr 50	Arg	Val	Val	Gln	Asp 55	Gly	Ser	His	Ser	Glu 60	Pro	Asp	Glu	Met
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Asn His Pro

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Ala	Glu	Met 35	Arg	Gln	Lys	Arg	Lys 40	Gly	Asp	Leu	Ser	Pro 45	Ala	Glu	Leu
Met	Met 50	Leu	Thr	Ile	Gly	Asp 55	Val	Ile	Lys	Gln	Leu 60	Ile	Glu	Ala	His
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Ala	Lys	Tyr	Gly	Leu 85	Ser	Ala	Gln	Pro	Arg 90	Leu	Val	Asp	Ile	Ile 95	Ala
Ala	Val	Pro	Pro 100	Gln	Tyr	Arg	Lys	Val 105	Leu	Met	Pro	Lys	Leu 110	Lys	Ala
Lys	Pro	Ile 115	Arg	Thr	Ala	Ser	Gly 120	Ile	Ala	Val	Val	Ala 125	Val	Met	Cys
Lys	Pro 130	His	Arg	Cys	Pro	His 135	Ile	Ser	Phe	Thr	Gly 140	Asn	Ile	Cys	Val
Tyr 145	Cys	Pro	Gly	Gly	Pro 150	Asp	Ser	Asp	Phe	Glu 155	Tyr	Ser	Thr	Gln	Ser 160
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Lys	Met 50	Gln	Pro	Gln	Thr	Gln 55	Thr	Thr	Glu	Lys	Ala 60	Asp	Ser	His	Lys
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Trp	Ile	Ser	Leu 20	Leu	Ala	Val	Pro	Pro 25	Gln	Tyr	Arg	Lys	Val 30	Leu	Met
Pro	Lys	Leu 35	Lys	Ala	Lys	Pro	Ile .40	Arg	Thr	Ala	Ser	Gly 45	Ile	Ala	Val
Val	Ala 50	Val	Met	Cys		55			Cys		His 60		Ser	Phe	Thr
Gly 65		Ile	Cys	Val	Tyr 70	Cys	Pro	Gly	Trp	Asp 75	Leu	Ile	Leu	Ile	Leu 80
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Tyr	Leu	Ala 35	Ala	Val	Leu	Val	Phe 40	Thr	Leu	Phe	Arg	Ser 45	Met	Ser	Phe
Pro	Cys 50	Ser	Trp	Ala	Ser	Ile 55	Ser	Cys	Leu	Ile	Thr 60	Ser	Pro	Ile	Val
Ser 65	Ile	Ile	Ser	Ser	Ala 70	Gly	Leu	Arg	Ser	Pro 75	Asp	Tyr	Gly	Gly	Phe 80
Thr	Thr	Arg	Pro	Gly 85	Ser	Asn	Ile	Leu	Gly 90	Ser	Arg	Val	Gly	His 95	Tyr
Thr	His	Gln	Thr 100	Met	Glu	Asp	Ser	Pro 105	Pro	Asp	Gln	Glu	Ala 110	Thr	Ala
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Pro	Cys	Pro	Val 20	Arg	Lys	Arg	Val	His 25	Ile	Trp	His	Gly	Ile 30	Ala	Pro
His	Gly	Gly 35	Trp	Leu	Ile	Ala	Gln 40	Cys	Lys	Thr	Gly	Trp 45	Asn	Thr	Gln
Asn	Gln 50	Asn	Gln	Val	Pro	Pro 55	Arg	Ala	Val	Tyr	Thr 60	Tyr	Ile	Ser	Cys
Lys 65	Thr	Asp	Val	Trp	Thr 70	Ser	.Val	Gly	Phe	Ala 75	His	His	Ser	His	Asp 80
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Thr	Phe	Phe	Ser 20	Lys	Val	Phe	Val	Gln 25	Asp	Asn	Phe	Lys	Asn 30	Asn	Ile
Lys	Ile	Asn 35	Asn	Gly	Phe	Asp	Phe 40	Ser	Leu	Lys	Ile	Glu 45	Lys	Lys	Gly

Val Gly Gly Val Asn His Trp Pro Phe Phe Trp Arg Gly Pro

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Ala	Thr 50	Val	Ala	Val	Pro	Leu 55	Val	Gly	Lys	Leu	Gly 60	Leu	Ile	Ser	Pro
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Arg	Leu	Glu 115	Thr	Gly	Ala	Phe	Asp 120	Gly	Arg	Pro	Ala	Asp 125	Tyr	Leu	Phe
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Arg	Phe	Lys	Ala 180	Cys	Tyr	Leu	Pro	Trp 185	Val	Ile	Leu	Gly	Phe 190	Asn	Tyr
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His	Leu 210	Tyr	Phe	Phe	Leu	Met 215	Phe	Arg	Tyr	Pro	Met 220	Asp	Leu	Gly	Gly
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Gly	Pro	Glu 35	Glu	Glu	Val	Gly	Arg 40	Ala	Asp	Glu	Ala	Glu 45	Phe	Ala	Asp
Gln	Gly 50	His	Gly	Asp	Gly	Gly 55	Gly	Glu	Pro	Ile	Ala 60	Arg	Asp	Arg	Arg
Asp 65	Ala	Pro	Glu	Pro	Val 70	Ser	Asp	Val	Arg	His 75	Leu	Arg	Pro	Thr	Gly 80
Ser	Gln	Asp	Ala	Gln 85	Asp	Arg	Pro	Thr	Pro 90	Arg	Ala	Asp	Pro	Leu 95	Thr
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His	Gly	Val 35	Leu	Glu	Ser	His	Leu 40	Ala	Glu	Lys	Gly	Arg 45	Gly	Met	Glu
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Gln	Ala	Ala 115	His	Val	Gln	Thr	Leu 120	Val	Leu	His	Cys	Gln 125	Pro	Phe	Gly
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Ser	Cys	Ser 35	Lys	Met	Gly	Asp	Val 40	Lys	Glu	Asn	Tyr	Leu 45	Glu	Thr	Phe
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13

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Cys	Asp	Pro 115	His	Ile	Gly	Leu	Leu 120	His	Arg	Gly	Thr	Glu 125	Lys	Leu	Ile
Glu	Tyr 130	Lys	Thr	Tyr	Leu	Gln 135	Ala	Leu	Pro	Tyr	Phe 140	Asp	Arg	Leu	Asp
Tyr 145	Val	Ser	Met	Met	Cys 150	Asn	Glu	Gln	Ala	Tyr 155	Ser	Leu	Ala	Val	Glu 160
Lys	Leu	Leu	Asn	Ile 165	Arg	Pro	Pro	Pro	Arg 170	Ala	Gln	Trp	Ile	Arg 175	Val
Leu	Phe	Gly	Glu 180	Ile	Thr	Arg	Leu	Leu 185	Asn	His	Ile	Met	Ala 190	Val	Thr
Thr	His	Ala 195	Leu	Asp	Leu	Gly	Ala 200	Met	Thr	Pro	Phe	Phe 205	Trp	Leu	Phe
Glu	Glu 210	Arg	Glu	Lys	Met	Phe 215	Glu	Phe	Tyr	Glu	Arg 220	Val	Ser	Gly	
Arg 225	Met	His	Ala	Ala	Tyr 230	Ile	Arg	Pro	Gly	Gly 235	Val	His	Gln	Asp	Leu 240
Pro	Leu	Gly	Leu	Met 245	Asp	Asp	Ile	Tyr	Gln 250	Phe	Ser	Lys	Asn	Phe 255	Ser
Leu	Arg	Leu	Asp 260	Glu	Leu	Glu	Glu	Leu 265	Leu	Thr	Asn	Asn	Arg 270	Ile	Trp
Arg	Asn	Arg 275		Ile	Asp	Ile	Gly 280	Val	Val	Thr	Ala	Glu 285			Leu
Asn	Туг 290	_	Phe	Ser	Gly	Val 295		Leu	Arg		300				
Asp 305		a Arg	l Tàs	Thr	Gln 310	Pro	Tyr	Asp	Val	315					320
Asp	val	L Pro	Val	. Gly 325		Arg	Gly	Asp	330	}				335	•
Arg	y Vai	l Glu	ı Glu 340		Arg	Gln	. Ser	Leu 345					350)	
Ası	ı Ly	s Met		o Pro	Gly	Glu	1 Ile 360) -		L As <u>r</u>		365	5		Ser
Pro	o Pro 37	-	s Ar	g Ala	a Glu	375	5		Sei		380)			His
Hi:		e Ly	s Le	u Tyi	Thr 390)	ı Gly			39	5			•	400
ту	r Th	r Al	a Il	e Gl: 40!		a Pro	o Ly:	s Gly	7 Gl: 41		e Gl	y Vai	l Ty:	r Leu 415	

Ser	Asp	Gly	Ser 420	Ser	Arg	Pro	Tyr	Arg 425	Cys	Lys	Ile	Lys	Ala 430	Pro	Gly ·
Phe	Ala	His 435	Leu	Ala	Gly	Leu	Asp 440	Lys	Met	Ser	Lys	Gly 445	His	Met	Leu
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Phe	Ser 50	Lys	Tyr	Asn	Ile	Leu 55	Gly	Thr	Tyr	Asp	Gly 60	Asn	Asp	Ile	Cys
Gln 65	His	Val	Ser	Leu	Arg 70	His	Leu	Val	Gln	Thr 75	Ser	Gln	Met	Gly	Lys 80
Thr	Arg	Ser	Leu	Asp 85	Leu	Ala	Ser	Ile	Arg 90	Ala	Ala	Ala	Ala	Ile 95	Arg
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Trp	Arg	Leu 35	Pro	Val	Gly	Cys	Phe 40	Phe	Ala	Trp	Val	His 45	Asn	Ser	Ser

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Ser . 65	Ala	Gly	Leu	Asn	Arg 70	Gln	Ser	Asp	Ser	Ser 75	Pro	Arg	Pro	Gln	His 80
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Lys	Asp	Arg 35	Lys	Lys	Ile	Gln	Phe 40	Ser	Val	Pro	Ala	Pro 45	Pro	Ser	Gln
Leu	Asp 50	Pro	Arg	Gln	Val	Glu 55	Met	Ile	Arg	Arg	Arg 60	Arg	Pro	Thr	Pro
Ala 65	Met	Leu	Phe	Arg	Leu 70	Ser	Glu	His	Ser	Ser 75	Pro	Glu	Glu	Glu	Ala 80
Ser	Pro	His	Gln	Arg 85	Ala	Ser	Gly	Glu	Gly 90	His	His	Leu	Lys	Ser 95	Lys
Arg	Pro	Asn	Pro 100	Cys	Ala	Tyr	Thr	Pro 105	Pro	Ser	Leu	Lys	Ala 110	Val	Gln
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Gln	Ala 130	Ser	Glu	Glu	Glu	Asp 135	Glu	Leu	Gly	Glu	Leu 140	-	Glu	Leu	Gly
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His	Arg	g His	s Pro		a Cys	s Ile	e Sei	Glr 25	n Glu 5	ı Glı	ı Val	l Gl	u Gly 30	-	: Ser

Leu	Phe	Pro 35	Arg	Asn	Pro	Leu	Tyr 40	Pro	His	Pro	Val	Leu 45	Cys	Ser	Ser ·
Pro	Arg 50	Leu	Leu	Gly	Leu	Arg 55	Leu	Leu	Thr	Ser	Arg 60	Arg	Leu	Arg	Leu
Val 65	Cys	Val	Cys	Leu	Phe 70	Ala	His	Leu	Trp	Leu 75	Ile	Pro	Arg	Glu	Pro 80
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Pro	Ser	Gly	Arg 100	Trp	Asp	Val	Arg	Gln 105	Pro	Thr	Leu	Glu	Asn 110	Pro	Glu
Asn	Arg	Glu 115	Gln	Gly	Phe	Ala	Leu 120	His	Asn	Ser	Thr	Pro 125	Gln	Ile	Leu
Ser	Pro 130	Gly	His	Arg	Arg	Pro 135	Thr	Gly	Gln	Asp	Pro 140	Lys	Ile	Trp	Gly
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Ala	Leu	Trp	Trp 20	Gly	Glu	Ala	Ser	Ser 25	Ser	Gly	Glu	Glu	Cys 30	Ser	Glu
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Thr	Trp 50	Arg	Gly	Ser	Ser	Trp 55	·Leu	Gly	Gly	Ala	Gly 60	Thr	Glu	Asn	Trp
Ile 65	Phe	Leu	Arg	Ser	Leu 70	Gly	Ser	Met	Ala	Arg 75	Gly	Val	Gly	Gly	Gly 80
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Ala	Gln 130	Arg	Val	Ala	Glu	Glu 135	Met	Lys	Cys	Thr	Leu 140	Gly	Ser	Lys	Val
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Leu Pro

20

Arg Lys

Cys Arg Leu Gly Ala Leu Pro Ala Arg Ser Pro Ser Ser Ser Leu Asp 40 35 Ser Gly Glu His Leu Ala Pro Ile Asp Ala Gly Asn Arg Asp Thr 60 55 50 His Arg Ser Glu Val 65 <210> 317 <211> 173 <212> PRT <213> homo sapiens <400> 317 Trp Gln Leu Cys Arg Gly Ala Arg Thr Ser Lys Ala Gln Glu Ser Pro 15 10 Glu Met Cys Asn Gln His Cys Leu Gly Met Glu Leu Pro Lys Arq Lys 30 25 20 Met Tyr Lys Ala Gln Pro Gly Ala Tyr Phe Leu Ser Ser Leu Pro Pro 40 35 Lys Lys Lys Lys Lys Lys Lys Thr Lys Lys Thr Asn Val Trp Asp Ser 55 50 Tyr Cys Gln Ile Ile Tyr Thr His Arg His Lys Ala Phe Leu Ser Lys 80 75 70 65 Ala Ala Cys Ile Phe Gly Gln Phe Leu His Phe Thr Asn Glu Ala Leu 85 Gln Thr Ser Ser Leu Val Leu Ile Gly Arg Pro Leu Pro Asp Glu Arg 110 105 100 Phe Cys Leu Ser Ser Gly Glu Asn Gln Lys Ala Phe Tyr Gln Ala Ser 125 120 115 Glu Thr Ser Ile Arg His Tyr Tyr 'Leu Ser Phe Leu Asn Ala Lys Leu 140 135 130 Phe His Thr Leu Val Asp Ser Gly Gly Thr Met Pro Tyr Arg Leu Lys 160 155 150 145 Glu Ala Ser Ala Phe Leu Ala Trp Ala Pro Cys Ser Val 170 165 <210> 318 <211> 96 <212> PRT <213> homo sapiens <400> 318 Trp Gln Leu Cys Arg Gly Ala Arg Thr Ser Lys Ala Gln Glu Ser Pro 10 1 Cys Lys Leu Gly Met Glu Gln His Glu Met Cys Asn

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710	110	35	501	200			40	- 4		•		45	·		•
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Leu	Gly	Cys 35	Val	Lys	Ile	Asn	Gln 40	Gly	Gly	Met	Lys	His 45	Ile	Phe	Leu
Ala	Thr 50	Lys	Leu	Glu	Phe	Leu 55	Arg	Glu	Gln	Met	Gln 60	Arg	Asp	Leu	Leu
Leu 65	Leu	Ala	Arg	Leu	Gln 70	Gly	Pro	Leu	Trp	Ser 75	His	Thr	Glu	Ala	Val 80
Thr	Gly	His	Lys	Pro 85	Arg	Arg	Ala	Arg	Gly 90	Ser	Cys	Ala	Glu	Ala 95	Pro
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Val	Phe	Ala	Ser 20	Val	Pro	Phe	Arg	Gly 25	Asp	Asp	Gly	Ile	Phe 30		Asp
Asn	Phe	Ile 35	Glu	Glu	Arg	Lys	Gln 40	_	Leu	Glu	Gln	Phe 45	Ile	Asn	Lys
Val	Ala 50	_	His	Pro	Leu	Ala 55		Asn	Glu	Arg	Cys 60		His	Met	Phe
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His	Ala														

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Ser	Glu	Met 35	Ala	Glu	Thr	Val	Ala 40	Asp	Thr	Arg	Arg	Leu 45	Ile	Thr	Lys
Pro	Gln 50	Asn	Leu	Asn	Asp	Ala 55	Tyr	Gly	Pro	Pro	Ser 60	Asn	Phe	Leu	Glu
Ile 65	Asp	Val	Ser	Asn	Pro 70	Gln	Thr	Val	Gly	Val 75	Gly	Arg	Gly	Arg	Phe 80
Thr	Thr	Tyr	Glu	Ile 85	Arg	Val	Lys	Thr	Asn 90	Leu	Pro	Ile	Phe	Lys 95	Leu
Lys	Glu	Ser	Thr 100	Val	Arg	Arg	Arg	Tyr 105	Ser	Asp	Phe	Glu	Trp 110	Leu	Arg
Ser	Glu	Leu 115	Glu	Arg	Glu	Ser	Lys 120	Val	Val	Val	Pro	Pro 125	Leu	Pro	Gly
Lys	Ala 130	Phe	Leu	Arg	Gln	Phe 135	Leu	Leu	Glu	Glu	Met 140	Met	Glu	Tyr	Leu
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Ser	Gly	Glu 35	Ala	Ala	Pro	Ala	Asp 40	Pro	His	Arg	Leu	Arg 45	Val	Ala	His
Ile	Asp 50	Leu	Glu	Glu	Val	Ala 55	Gly	Gly	Ser	Val	Gly 60	Val	Ile	Gln	Val
Leu 65	_	Leu	Gly	Asp	Gln 70	Pro	Pro	Gly	Val	Ser 75	His	Gly	Leu	Arg	His 80
Phe	Ala	Val	Ala	Ala 85	Ala	Ala	Ala	Ala	Gly 90	Ser	Leu	Arg	Pro	Leu 95	Arg

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Arg Ala

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Glu	Ser 50	Gln	Leu	Pro	Gly	Pro 55	Asp	Gln	Leu	Gln	Gln 60	Phe	Gln	Val	Val
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Leu	Ser	Leu	Ile	Arg 85	Gly	Lys	Ser	Leu	Leu 90	Phe	Val	Asn	Thr	Leu 95	Glu
Arg	Ser	Tyr	Arg 100	Leu	Arg	Leu	Phe	Leu 105	Glu	Gln	Phe	Ser	Ile 110	Pro	Thr
Cys	Val	Leu 115	Asn	Gly	Glu	Leu	Pro 120	Leu	Arg	Ser	Arg	Cys 125	His	Ile	Ile
Ser	Gln 130	Phe	Asn	Gln	Gly	Phe 135	Tyr	Asp	Cys	Val	Ile 140	Ala	Thr	Asp	Ala
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Lys	Gly	Asp	Lys	Ala 165	Ser	Asp	Pro	Glu	Ala 170	Gly	Val	Ala	Arg	Gly 175	Ile
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Pro	Glu	Ala 195	Tyr	Ile	His	Arg	Ala 200	Gly	Arg	Thr	Ala	Arg 205	Ala	Asn	Asn
Pro	Gly 210	Ile	Val	Leu	Thr	Phe 215	Val	Leu	Pro	Thr	Glu 220	Gln	Phe	His	Leu
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Leu 305	Pro	Leu	His	Pro	Ala 310	Val	Val	Lys	Pro	His 315	Leu	Gly	His	Val	Pro 320
Asp	Tyr	Leu	Val	Pro 325	Pro	Ala	Leu	Arg	Gly 330	Leu	Val	Arg	Pro	His 335	Lys
Lys	Arg	Lys	Lys 340	Leu	Ser	Ser	Ser	Cys 345	Arg	Lys	Ala	Lys	Arg 350	Ala	Lys
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Ala	Leu	Gly	Phe 20	Glu	His	Met	Gly	Leu 25	Asp	Pro	Arg	Leu	Leu 30	Gln	Ala
Val	Thr	Asp 35	Leu	Gly	Trp	Ser	Arg 40	Pro	Thr	Leu	Ile	Gln 45	Glu	Lys	Ala
Ile	Pro 50	Leu	Ala	Leu	Glu	Gly 55	Lys	Asp	Leu	Leu	Ala 60	Arg	Ala	Arg	Thr
Gly 65	Ser	Gly	Lys	Thr	Ala 70	Ala	Tyr	Ala	Ile	Pro 75	Met	Leu	Gln	Leu	Leu 80
Leu	His	Arg	Lys	Ala 85	Thr	Gly	Pro	Val	Val 90	Glu	Gln	Ala	Val	Arg 95	Gly
Leu	Val	Leu	Val 100	Pro	Thr	Lys	Glu	Leu 105	Ala	Arg	Gln	Ala	Gln 110	Ser	Met
Ile	Gln	Gln 115		Ala	Thr	Tyr	Cys 120	Ala	Arg	Asp	Val	Arg 125	Val	Ala	Asn
Val	Ser 130		. Ala	Glu	Asp	Ser 135		Ser	Gln	Arg	Ala 140	Val	Leu	Met	Glu
Lys 145		a Asp	Val	Val	Val 150	_	Thr	Pro	Ser	Arg 155		Leu	Ser	His	Leu 160
Gln	Glr	a Asp	Ser	Leu 165	_	Leu	a Arg	Asp	Ser 170		Glu	Leu	Leu	Val 175	
Asp	Glu	ı Ala	a Asp 180		Lev	ı Phe	e Ser	Phe 185	_	Phe	Glu	Glu	. Glu 190		Lys

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Ser	Leu	Leu 195	Trp	Glu	Gly	Arg	Val 200	Thr	Cys	Pro	Gly	Phe 205	Thr	Arg	Leu ·
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Ser	Thr 50	Arg	Ala	Ser	Pro	Val 55	His	Glu	Gly	Cys	Lys 60	Pro	Val	Leu	His
Asn 65	Val	Leu	Ser	Ser	Arg 70	Glu	Ala	Gln	Gln	Pro 75	Gln	Glu	Gly	Leu	Ala 80
Val	Gly	Leu	Asn	Phe 85	Phe	Pro	Leu	Cys	Leu 90	Lys	Leu	Arg	Ser	Gly 95	Phe
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Ala	Val	Glu	Thr 20	Arg	His	Leu	Leu	Ser 25	Pro	Ala	Leu	Met	Thr 30	Leu	Arg
Lys	Glu	Asp 35	Val	Ile	Gln	Gly	Lys 40	Phe	Leu	Ile	Pro	Lys 45	Leu	Pro	Val
His	Val 50	Asn	Arg	Thr	Ser	Phe 55	Tyr	Ser	Ser	Arg	Cys 60	Thr	Gly	Ser	Leu
Ala 65															
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Asp	Val	Leu	Val 20	Pro	Trp	His	Leu	Lys 25	Gly	Asn	Pro	Asp	Lys 30	Gly	Lys
Pro	Val	Glu 35	Pro	Phe	Gly	Pro	Ile 40	Gly	Ser	Gln	Asp	Pro 45	Ser	Pro	Val
Phe	His 50	Arg	Tyr	Tyr	His	Val 55	Phe	Arg	Glu	Gly	Glu 60	Leu	Glu	Gly	Ala
Cys 65	Arg	Thr	Val	Ser	Asp 70	Val	Arg	Ile	Leu	Gln 75	Ser	Tyr	Tyr	Asp	Gln 80
Gly	Asn	Trp	Cys	Val 85	Ile	Leu	Gln	Lys	Ala 90						
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Leu	Gln	Asn	Ser 20	Asp	Ile	Thr	His	Ser 25	Pro	Ala	Gly	Thr	Phe 30	Gln	Phe
Ser	Leu	Thr 35	Glu	His	Met	Val	Val 40	Thr	Met	Lys	His	Arg 45	Thr	Trp	Val
Leu	Gly 50	Ser	Tyr	Gly	Thr	Lys 55	Trp	Leu	Asn	Arg	Phe 60	Ala	Phe	Ile	Arg
Ile 65	Ser	Leu	Lys	Val	Pro 70	Gly	'Asn	Gln	Tyr	Ile 75	Leu	Thr	Asn	Lys	80 Lys
Lys	Ser	Cys													
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Glu	Arg	Glu	Glu 20	Arg	Glu	Arg	Lys	Arg 25	Arg	Arg	Glu	Glu	Glu 30	Glu	Arg

Glu Lys Glu Arg Ala Arg Asp Arg Glu Arg Arg Lys Arg Ser Arg Ser 35 40 45

Arg Ser Arg His Ser Ser Arg Thr Ser Asp Arg Cys Ser Arg Ser

	50					55					60				
Arg 65	Asp	His	Lys	Arg	Ser 70	Arg	Ser	Arg	Glu	Arg 75	Arg	Arg	Ser	Arg	Ser 80
Arg	Asp	Arg	Arg	Arg 85	Ser	Arg	Ser	His	Asp 90	Arg	Ser	Glu	Arg	Lys 95	His
Arg	Ser	Arg	Ser 100	Arg	Asp	Arg	Arg	Arg 105	Ser	Lys	Ser	Arg	Asp 110	Arg	Lys
Ser	Tyr	Lys 115	His	Arg	Ser	Lys	Ser 120	Arg	Asp	Arg	Glu	Gln 125	Asp	Arg	Lys
Ser	Lys 130	Glu	Lys	Glu	Lys	Arg 135	Gly	Ser	Asp	Asp	Lys 140	Lys	Ser	Ser	Val
Lys 145	Ser	Gly	Ser	Arg	Glu 150	Lys	Gln	Ser	Glu	Asp 155	Thr	Asn	Thr	Glu	Ser 160
Lys	Glu	Ser	Asp	Thr 165	Lys	Asn	Glu	Val	Asn 170	Gly	Thr	Ser	Glu	Asp 175	Ile
Lys	Ser	Glu	Gly 180	Asp	Thr	Gln	Ser	Asn 185							
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Asp	Tyr	Arg	Thr 20	Ser	His	Tyr	Phe	Phe 25	Tyr	His	Gln	Ile	Pro 30	Ser	Phe
Leu	Ser	Pro 35	Trp	Ile	Phe	Tyr	Leu 40	Val	Leu	Cys	Pro	Asp 45	Phe	Cys	Ser
Cys	Ala 50	Tyr	Met	Thr	Phe	Asp 55	Pro	Gly	Phe	Leu	Ile 60	Phe	Phe	Asp	Pro
Asp 65	Phe	Glu	Ile	Cys	Val 70	Phe	Phe	Leu	Ile	Asp 75	His	Gly	Phe	Cys	Phe 80
Phe	Val	Asp	Leu	Tyr 85	Phe	Cys	Ser	Ala	Phe 90	Phe	Leu	Tyr	Phe	Val 95	Thr
Phe	Cys	Gly	Pro 100	Glu	Thr	Cys	Cys	Ile 105	Phe	Cys	Leu	Met	Phe 110	Gly	Leu
Ser	Val	Tyr 115	Phe	Val	Asn	Asp	Phe 120	Ser	Phe	Phe	Phe	Leu 125	Cys	His	Glu
Pro	Phe 130	Leu	Phe	Leu	Phe	Leu 135	Pro	Leu	Pro	Phe	Val 140	Phe	Ser	Phe	Leu
Phe 145	Leu	Pro	Phe	Leu	Ser 150	Pro	Val	Leu	Ser	Leu 155	Ser	Leu	Leu	Cys	Ser 160

Cys	Phe	Ser	Phe	Leu 165	Arg	Arg	Ser	Ser	Arg 170	Ile	Arg	Leu	Phe	Gly 175	Ser
Ser	Pro														
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Leu	Val	Ser	Leu 20	Ser	Phe	Asp	Ser	Val 25	Phe	Val	Ser	Ser	Leu 30	Cys	Phe
Ser	Arg	Leu 35	Pro	Asp	Phe	Thr	Leu 40	Leu	Phe	Leu	Ser	Ser 45	Asp	Pro	Leu
Phe	Ser 50	Phe	Ser	Leu	Asp	Phe 55	Leu	Ser	Cys	Ser	Leu 60	Ser	Arg	Leu	Leu
Leu 65	Leu	Cys	Leu	Tyr	Asp 70	Phe	Arg	Ser	Arg	Leu 75	Phe	Asp	Leu	Leu	Arg 80
Ser	Arg	Leu	Arg	Asp 85	Leu	Cys	Phe	Leu	Ser 90	Asp	Arg	Ser	Trp	Leu 95	Leu
Leu	Leu	Arg	Arg 100	Ser	Leu	Leu	Leu	Leu 105	Arg	Leu	Leu	Ser	Leu 110	Leu	Arg
Asp	Leu	Leu 115	Trp	Ser	Arg	Asp	Leu 120	Leu	His	Leu	Leu	Ser 125	Asp	Val	Arg
Leu	Glu 130	Cys	Leu	Leu	Arg	Glu 135	Arg	Leu	Leu	Phe	Leu 140	Leu	Ser	Leu	Ser
Arg 145	Ala	Leu	Ser	Phe	Ser 150	Leu	Ser	Ser	Ser	Ser 155	Leu	Arg	Leu	Phe	Leu 160
Ser	Leu	Ser	Ser	Leu 165	Ser	Leu	Ser	Arg	Ser 170	Phe	Ser	Leu	Ser	Ser 175	Leu
Leu	Leu	Leu	Leu 180	Leu	Ser										
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Trp	Cys	s Phe	Ala		Pro	Val	. Pro	Pro 25		Ala	a Asp	His	Lys		Trp
Asp) Phe	e Val		ı Gly	туг	Phe	His		ı Phe	. Phe	e Leu	Thr 45		Lys	Glu

Ser	Pro 50	Leu	Leu	Thr	Gln	Glu 55	Thr	Gln	Thr	Gln	Leu 60	Leu	Gln	Gln	Phe ·
His 65	Arg	Asn	Gly	Thr	Asp 70	Leu	Leu	Asp	Met	Gln 75	Met	His	Ala	Ser	Ala 80
Thr	Ala	Ala	Pro	Leu 85	Trp	Gly	Ala								
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Cys	Asn	Asn	Ser 20	Ile	Gly	Met	Gly	Gln 25	Thr	Tyr	Leu	Thr	Cys 30	Arg	Cys
Met	Leu	Leu 35	Leu	Gln	Gln	Pro	His 40	Cys	Gly	Val	Pro	Asp 45	Gly	Ser	Asp
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Trp	Asn 50	Gly	Glu	Thr	Pro	Gly 55	Gln	Glu	Asp	Ser	Asn 60	Ser			
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Pro	Pro	Ala	Pro 20	Asn	Cys	Gly	Asp	Glu 25	Glu	Arg	Lys	Gln	Trp 30	Leu	Trp
Phe	Leu	Ser 35	Glu	Gly	Arg	Leu	Arg 40	Thr	Glu	Arg	Ser	Asn 45	His	Gln	Gly
His	Arg 50	Phe	Trp	Lys	Ser	Ser 55	Arg	Gly	Gly	Trp	Leu 60	Glu	Glu	Gln	
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Gln	His	Val	Gln 20	Thr	Gly	Ser	Phe	Phe 25	Ser	Ile	Ser	Leu	Leu 30	Ser	Lys
Ser	Arg	Thr 35	Ala	Gln	Trp	Leu	Cys 40	Gln	Gly	Gly	Ser	Ser 45	Ser	Tyr	Ser
His	Phe 50		Gly	Ser	Leu	Lys 55	Ser	Thr	Arg	Tyr	Tyr 60	Arg	Gly	Ser	Arg
Ser 65															
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Ser	. Lev	ı Lys	Leu 20		Pro	His	Gln	Pro 25	_	Ile	Val	Glu	30	-	Lys
Gly	y Ser	Asn 35	_	Tyr	Gly	Phe	Tyr		Arg	Ala	Gly	Ser 45		Gln	
Gly	y Glr 50		e Ile	. Lys	Asp	Ile 55		Ser	Gly	Ser	Pro 60		Glu	Glu	Ala

Gly 65	Leu	Lys	Asn	Asn	Asp 70	Leu	Val	Val	Ala	Val 75	Asn	Gly	Glu	Ser	Val [.] 80
Glu	Thr	Leu	Asp	His 85	Asp	Ser	Val	Val	Glu 90	Met	Ile	Arg	Lys	Gly 95	Gly
Asp	Gln	Thr	Ser 100	Leu	Leu	Val	Val	Asp 105	Lys	Glu	Thr	Asp	Asn 110	Met	Tyr
Arg	Leu	Ala 115	His	Phe	Ser	Pro	Phe 120	Leu	Tyr	Tyr	Gln	Ser 125	Gln	Glu	Leu
Pro	Asn 130	Gly	Ser	Val	Lys	Glu 135	Ala	Pro	Ala	Pro	Thr 140	Pro	Thr	Ser	Leu
Glu 145	Val	Ser	Ser	Pro	Pro 150	Asp	Thr	Thr	Glu	Glu 155	Val	Asp	His	Lys	Pro 160
Lys	Leu	Cys	Arg	Leu 165	Ala	Lys	Gly	Glu	Asn 170	Gly	Tyr	Gly	Phe	His 175	Leu
Asn	Ala	Ile	Arg 180	Gly	Leu	Pro	Gly	Ser 185	Phe	Ile	Lys	Glu	Val 190	Gln	Lys
Gly	Gly	Pro 195	Ala	Asp	Leu	Ala	Gly 200	Leu	Glu	Asp	Glu	Asp 205	Val	Ile	Ile
Glu	Val 210	Asn	Gly	Val	Asn	Val 215	Leu	Asp	Glu	Pro	Tyr 220	Glu	Lys	Val	Val
Asp 225	Arg	Ile	Gln	Ser	Ser 230	Gly	Lys	Asn	Val	Thr 235	Leu	Leu	Val	Cys	Gly 240
Lys	Lys	Ala	Tyr	Asp 245	Tyr	Phe	Gln	Ala							
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His	Leu	Trp	Thr 20	Arg	Gln	Leu	Ala	His 25		Tyr	His	Tyr	Tyr 30	Ile	His
Gly	Pro	Lys	Gly	Asn	Glu	Ile	Arg 40		Ser	Lys	Glu	Val 45	Glu	Pro	Phe

40

55

Ser Met Phe Glu Lys

ક.ં હ્≥

60

Gly Lys Val Pro

Ile Val Lys 65

50

35

Ile Asp Ile Glu Ile

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Asn Asn

<211> 44

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Glu	His	Gln	Lys 20	Lys	Leu	Asn	Leu	Ser 25	Thr	Ile	Leu	Ile	Leu 30	Lys	Phe
Leu	Cys	Leu 35	Lys	Lys	Gly	Arg	Tyr 40	Leu	Arg	Leu	Ser				
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Glu	Tyr	Ser	Ser 20	Asp	Lys	Tyr	Ala	Leu 25	Thr	Val	Val	Ser	Lys 30	Gly	Gly
Asn	Asn	Phe 35	Ser	Ser	Thr	Val	Cys 40	Val	Leu	Val	Val	Pro 45	Leu		
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<400> Gly 1 Val Leu	342 Arg Gly Ala Glu 50 Met	Trp Pro Ala 35 Thr	Arg Thr 20	5 Ala Phe Gly	Met Cys	Ala Arg Val	Glu •Pro 40	Leu 25 His	10 Leu Glu Ile	Gln Trp His	Glu Glu Thr	Glu Val 45 Lys	Leu 30 Leu	Ser Ser Glu	Val Arg
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145					150					155					160
Trp	Ile	Thr	Leu	Leu 165	His	Leu	Asp	His	Met 170	Arg	Ala	Lys	Thr	Lys 175	Tyr
Val	Lys	Ile	Val 180	Glu	Lys	Trp	Ala	Ser 185	Asp	Leu	Arg	Leu	Thr 190	Gly	Arg
Leu	Met	Phe 195	Met	Gly	Lys	Ile	Ile 200	Leu	Asp	Phe	Thr	Thr 205	Gly	Arg	Gln
Lys	Gln 210	Pro	Gln	Gly	Val	Leu 215	Asp	Ser	Ser	Glu	Asn 220	Leu	Gln	Ser	Arg
Cys 225	Gly	Leu	Lys	Trp	Lys 230	Glu	Met	Gln	Arg	Glu 235	Asn	Asp			
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Ile	Leu	Gln	Lys 20	Thr	Ser	Lys	Val	Asp 25	Val	Asp	Ser	Ser	Gly 30	Lys	Lys
Cys	Lys	Glu 35	Lys	Met	Ile	Ser	Val 40	Leu	Phe	Glu	Thr	Lys 45	Val	Gln	Thr
Glu	His 50	Lys	Arg	Phe	Leu	Ala 55	Phe	Glu	Val	Lys	Glu 60	Tyr	Ser	Ala	Leu
Asp 65	Glu	Leu	Gln	Lys	Glu 70	Phe	Glu	Thr	Ala	Gly 75	Leu	Lys	Lys	Leu	Phe 80
Ser	Glu	Phe	Val	Leu 85	Ala	Leu	Val	Lys							
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Leu	Lys	Asp	Ser 20	Cys	Leu	Pro	Phe	His 25	Phe	Thr	Arg	Ala	Ser 30	Thr	Asn
Ser	Glu	Lys 35		Phe	Leu	Ser	Pro 40	Ala	Val	Ser	Asn	Ser 45		Cys	Asn
Ser	Ser 50		Ala	Glu	Tyr	Ser 55		Thr	Ser	Asn	Ala 60	_	Asn	Leu	Leu
Cys 65		. Val	Cys	Thr	Phe 70		Ser	Asn	Ser	Thr 75		Ile	Ile	Phe	Ser 80

Leu	His	Phe	Phe	Pro 85	Leu	Glu	Ser	Thr	Ser 90	Thr	Leu	Glu	Val	Phe 95	-
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Gly	Pro	Cys	Cys 20	His	Gln	His	Gly	Asp 25	Phe	Val	Pro	Cys	Pro 30	Val	Leu
Ser	Ala	Arg 35	Met	Ser	Gln	Pro	Glu 40	Ala	Glu	Glu	Ala	Ala 45	Leu	Val	Ala
His	Ala 50	Val	Gly	His	Asp	Cys 55	Val	Cys	Ser	Gly	Gly 60	Gly	Val	Leu	Leu
Pro 65	His	His	Arg	Arg	Asn 70	Asn	Leu								
<210><211><211><212><213>	PRT	sapie	ns												
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Ala	Leu	Ala	Ala 20	Thr	Asn	Met	Glu	Thr 25	Leu	Tyr	Arg	Val	Pro 30	Phe	Leu
Val	Leu	Glu 35	Cys	Pro	Asn	Leu	Lys 40	Leu	Lys	Lys	Pro	Pro 45	Trp	Leu	His
Met	Pro 50	Ser	Ala	Met	Thr	Val 55		Ala	Leu	Val	Val 60	Val	Ser	Tyr	Phe
Leu 65	Ile	Thr	Gly	Gly	Ile 70	Ile	Tyr	Asp	Val	Ile 75	Val	Glu	Pro	Pro	Ser 80
Val	Gly	Ser	Met	Thr 85	Asp	Glu	His	Gly	His 90	Gln	Arg	Pro	Val	Ala 95	Phe
Leu	Ala	Tyr	Arg 100	Val	Asn	Gly	Gln	Tyr 105	Ile	Met	Glu	Gly	Leu 110	Ala	Ser
Ser	Phe	Leu 115	Phe	Thr	Met	Gly	Gly 120	Leu	Gly	Phe	Ile	Ile 125	Leu	Asp	Arg
Ser	Asn 130	Ala	Pro	Asn	Ile	Pro 135	Lys	Leu	Asn	Arg	Phe 140	Leu	Leu	Leu	Phe
Ile 145	Gly	Phe	Val	Cys	Val 150	Leu	Leu	Ser	Phe	Phe 155	Met	Ala	Arg	Val	Phe 160

Met	Arg	Met	Lys	Leu 165	Pro	Gly	Tyr	Leu	Met 170	Gly					-
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Gly	Gln	Glu	Ser 20	Tyr	Trp	Pro	Leu	Met 25	Pro	Met	Phe	Ile	Ser 30	His	Arg
Thr	Asp	Thr 35	Trp	Arg	Phe	Asn	Asn 40	Asn	Ile	Ile	Asn	Tyr 45	Ser	Ser	Gly
Asp	Glu 50	Glu	Val	Arg	His	His 55	His	Gln	Ser	Ile	His 60	Ser	His	Gly	Arg
Arg 65	His	Val	Gln	Pro	Gly 70	Arg	Leu	Leu	Gln	Leu 75	Gln	Val	Gly	Thr	Phe 80
Glu	His								•						
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His	Lys		Ile Asn 20	5			Asn Pro				Glu Pro	Lys · Val	Ala Ile 30		
His 1 Glu	Lys	Trp	Asn 20	5	Leu	Gly	Pro	His 25	10 Pro		Pro	Val	Ile	15 Phe	
His 1 Glu	Lys Leu Gln	Trp Thr 35	Asn 20 Ala	5 Ser	Leu Arg	Gly Met	Pro Arg . 40	His 25 Asn	10 Pro Arg	Ile	Pro	Val Val 45	Ile 30	15 Phe Pro	Lys Glu
His 1 Glu Gln	Lys Leu Gln Glu 50	Trp Thr 35	Asn 20 Ala Asn	5 Ser Asn Ala	Leu Arg Val	Gly Met Leu 55	Pro Arg . 40	His 25 Asn Val	10 Pro Arg Asp	Ile Leu Asp	Pro Gln Asp 60	Val Val 45	Ile 30 Phe Leu	15 Phe Pro	Lys Glu
His 1 Glu Gln Leu Thr	Lys Leu Gln Glu 50	Trp Thr 35 Thr	Asn 20 Ala Asn Leu	Ser Asn Ala Val	Leu Arg Val	Gly Met Leu 55	Pro Arg . 40 Met	His 25 Asn Val Ser	10 Pro Arg Asp	Ile Leu Asp Trp 75	Pro Gln Asp 60	Val Val 45	Ile 30 Phe Leu	15 Phe Pro	Lys Glu Ser
His 1 Glu Gln Leu Thr 65 Gln	Lys Leu Gln Glu 50	Thr 35 Thr Asp	Asn 20 Ala Asn Leu Gly	Ser Asn Ala Val	Leu Arg Val Phe 70 Cys	Gly Met Leu 55 Ala	Pro Arg . 40 Met	His 25 Asn Val Ser	10 Pro Arg Asp Val Ser	Ile Leu Asp Trp 75	Pro Gln Asp 60	Val Val 45 Thr	Ile 30 Phe Leu	15 Phe Pro Ile Pro	Lys Glu Ser Asp
His 1 Glu Gln Leu Thr 65 Gln Cln (210) (211) (212)	Lys Leu Gln Glu 50 Pro Ile Gly 349 50 PRT	Thr 35 Thr Asp	Asn 20 Ala Asn Leu Gly Tyr 100	Ser Asn Ala Val Ile 85	Leu Arg Val Phe 70 Cys	Gly Met Leu 55 Ala	Pro Arg . 40 Met	His 25 Asn Val Ser	10 Pro Arg Asp Val Ser	Ile Leu Asp Trp 75	Pro Gln Asp 60	Val Val 45 Thr	Ile 30 Phe Leu	15 Phe Pro Ile Pro	Lys Glu Ser Asp

Glu Ser Lys Asn Lys Val Trp Gly Ala Asp Glu Cys Val Ile Ile Tyr

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His	Gln	His	Cys 20	Ile	Gly	Phe	Gln	Phe 25	Arg	Lys	Asp	Leu	Glu 30	Ser	Ile
Ser	His	Pro 35	Val	Cys	Cys	Leu	Leu 40	Phe	Glu	Asp	His	Arg 45	Asp	Arg	Val
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Leu	Met	Ser	Val 20	Ser	Ser	Ser	Thr	Ile 25	Asn	Thr	Ala	Leu	Val 30	Ser	Ser
Ser	Gly	Lys 35	Thr	Trp	Ser	Arg	Phe 40	Leu	Ile	Leu	Phe	Ala 45	Val	Cys	Cys
Leu	Lys 50	Ile	Thr	Gly	Ile	Gly 55	Trp	Gly	Pro	Arg	Glu 60	Phe	His	Asn	Ser
Ser 65	Gly	Ala	Phe	Ser	Pro 70	Ile	Leu	Phe	His	Thr 75	Thr	Ile	Thr	Leu	
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His	Lys	Val	Leu 20	Ser	Ser	Gly	Val	Cys 25	Ser	Arg	Leu	Leu	Gly 30	Ile	Gln
Arg	Glu	Gly 35	Arg	Asn	Gln	Glu	Phe 40	Gln	Lys	His	Ile	His 45	Val	Ala	Thr
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Val 65		Phe	Leu	Ala	Arg 70										
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Pro	Glu	Phe 35	Trp	Cys	Val	Leu	Pro 40	Pro	Pro	Gly	Tyr	Thr 45	Glu	Arg	Arg
Gln	Glu 50	Ser	Gly	Val	Pro	Glu 55	Ala	Tyr	Thr	Cys	Gly 60	Tyr	Pro	Ser	Asn
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Gln	Met	Ala	Val 20	Val	Pro	Ile	Ser	Thr 25	Lys	Pro	Gln	Arg	Ala 30	Arg	Lys
Asn	Thr	Ser 35	Gln	Pro	Cys	Ser	Leu 40	Ser	Glu	His	Arg	Met 45	Pro	Leu	Val
Ala	Gly 50	Val	Ala	Thr	Cys	Ile 55	Cys	Phe	Trp	Asn	Ser 60				
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Asn	Ser	Gly	Leu 20	Gln	Leu	Leu	Gly	Phe 25	Ser	Met	Ala	Leu	Leu 30	Gly	Trp
Val	Gly	Leu 35	Val	Ala	Cys	Thr	Ala 40	Ile	Pro	Gln	Trp	Gln 45	Met	Ser	Ser
Tyr	Ala 50	Gly	Asp	Asn	Ile	Ile 55	Thr	Ala	Gln	Ala	Met 60	Tyr	Lys	Gly	Leu
Trp 65	Met	Asp	Cys	Val	Thr 70	Gln	Ser	Thr	Gly	Met 75	Met	Ser	Cys	Lys	Met 80
Tyr	Asp	Ser	Val	Leu 85	Ala	Leu		Ala	Ala 90	Leu		Ala	Thr	Arg 95	Ala
Leu	Met	Val	Val 100	Ser	Leu	Val	Leu	Gly 105	Phe	Leu	Ala	Met	Phe 110	Val	Ala
Thr	Met	Gly 115	Met	Lys	Cys	Thr	Arg 120	Cys	Gly	Gly	Asp	Asp 125	Lys	Val	Lys

Lys	Ala	Arq	Ile	Ala	Met	Gly	Gly	Gly	Ile	Ile	Phe	Ile	Val	Ala	Gly ·
270	130	5				135	_	-			140				m 1
Leu 145	Ala	Ala	Leu	Val	Ala 150	Cys	Ser	Trp	Tyr	Gly 155	His	Gln	Ile	Val	Thr 160
Asp	Phe	Tyr	Asn	Pro 165	Leu	Ile	Pro	Thr	Asn 170	Ile	Lys	Tyr	Glu	Phe 175	Gly
Pro	Ala	Ile	Phe 180	Ile	Gly	Trp	Ala	Gly 185	Ser	Ala	Leu	Val	Ile 190	Leu	Gly
Gly	Ala	Leu 195	Leu	Ser	Cys	Ser	Cys 200	Pro	Gly	Asn	Glu	Ser 205	Lys	Ala	Gly
Tyr	Arg 210	Ala	Pro	Arg	Ser	Tyr 215	Pro	Lys	Ser	Asn	Ser 220	Ser	Lys	Glu	Tyr
Val 225															
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Ala	Arg	Pro 35	Val	Arg	Gly	Leu	Ala 40	Gly	His	Ser	Ser	Pro 45	Asn	Gly	Gly
Leu	Pro 50	Gly	Ala	Gly	Leu	Pro 55	Gly	His	Val	Cys	Gly 60	His	Asp	Gly	His
Glu 65	Val	His	Ala	Leu	Trp 70	Gly	·Arg	Arg	Gln	Ser 75	Glu	Glu	Gly	Pro	Tyr 80
Ser	His	Gly	Trp	Arg 85	His	Asn	Phe	His	Arg 90	Gly	Arg	Ser	Cys	Arg 95	Leu
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Arg	Pro	Pro	Asp 20	Pro	Pro	Ser	Pro	Ala 25		Pro	Trp	Arg	Ser 30	Pro	Ala

Thr	Ala	Gly 35	Pro	Asn	Trp	Pro	Phe 40	Pro	Pro	Ser	Glu	Asn 45	Thr	Gly	Gly
Ala	Gly 50	Arg	Gly	Asp	Pro	Thr 55	Val	Lys	Gln	Thr	Thr 60	Leu	Gly	Gly	Gln
Pro 65	His	Lys	Arg	Lys	Leu 70	Glu	Val	Glu	Phe	Ser 75	Gly	His	Pro	Lys	Arg 80
Gln	Lys	Gly	Phe	Gly 85	Pro	Gly	Glu	Cys	Lys 90	Ser	Cys	His	Gln	Thr 95	Thr
His	Lys	Ser	Thr 100	Pro	Pro	Val	Lys	Arg 105	Trp	Pro	Arg	Gly	Thr 110	Gly	Ser
Arg	Ile	Arg 115	Arg	Glu	Gly	Gly	Ser 120	Arg	Gln	Asn	Trp	Trp 125	Ser	Pro	Lys
Ala	Arg 130	Arg	Phe	Pro	Pro	Gly 135	Ala	Leu	Gly	Asp	Pro 140	Leu	Ser	Pro	Pro
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Ala	Ser	Tyr	Arg 20	Leu	His	Phe	Glu	Ala 25	Leu	Met	Asn	Ile	Pro 30	Val	Leu
Val	Leu	Asp 35	Val	Asn	Asp	Asp	Phe 40	Ala	Glu	Glu	Val	Thr 45	Lys	Gln	Glu
Asp	Leu 50	Met	Arg	Glu	Val	Gly 55	Arg	Thr	Leu	Thr	Pro 60	Val	Phe	Leu	Val
Val 65	Ser	Leu	Trp	Leu	Tyr 70	Leu	Leu [.]								
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Ser	Lys	Ile	Ile 20	Ile	Asp	Ile	Gln	His 25	Gln	His	Trp	Asn	Val 30	His	Gln
Ser	Leu	Lys 35	Val	Glu	Pro	Ile	Arg 40	Ser	Val	Asn	Val	Trp 45	Gly	Thr	Glu
Lvs	Lvs	Lys	Cys	Asn	Leu	Ser	Gln	Val	Ser	His	Thr	Arg	Gln	Val	Leu
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Leu Arg Glu Gln Ile 65

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Ser Lys Trp Ser Leu 50

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Ser Cys Trp Glu Thr Lys Trp Thr Ser Cys Pro Arg Met Leu Leu Ala

Thr Gly Arg Gly Cys Gly Ser Asp Cys Gly Arg Thr Val Pro Ala Pro

Gly Ser Cys Trp Pro Leu Ala 'Pro Arg Ala Thr Ala Pro Arg Gln Gly
35 40 45

His Ala Glu Leu Val Pro Glu Ser Glu Ser Gly Thr Gly Arg Arg Ala 60 55

Ser Gln Arg Gln Asp Arg Leu Ala Ala Asp Gly Arg Gly Gln Ser 80 75 70 65

Gly Trp Ala Leu Ala Leu Leu Ser Cys Pro Asp Leu Gly Arg Val 95 90

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Pro	Cys	Ala 35	Tyr	His	Leu	Leu	Gly 40	Gln	Gly	Arg	Arg	Ser 45	Val	Ser	Glu
Ala	Cys 50	Arg	Ser	Tyr	Val	Thr 55	Pro	Asp	Ser	Asn	Gly 60	Trp	Lys	Arg	Thr
Asn 65	Gly	Gln	Asp	Phe	Leu 70	Leu	Leu	Leu	Leu	Lys 75	Thr	Leu	Met	Val	Lys
Arg	Lys	Asp	Trp	Gly 85	Gln	Pro	Gly	Ser	Ser 90	Gly	Pro	Thr	Ser	Lys 95	Phe
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Cys	Ser	Trp	Leu	Pro	Ala	Glu	Ala 40	Ala	Gly	Ala	Thr	Val 45	Gly	Gly	Leu
Cys	Pro 50	Arg	Arg	Ala	Pro	Ala 55	Gly	Pro	Trp	His	Gln 60	Gly	Pro	Gln	Arg
Pro 65	Val	Lys	Asp	Glu	Pro 70	Gln	Asp	Gly	Glu	Asn 75	Pro	Asn	Pro	Pro	Asn 80
Trp	Ser	Arg	Thr	Val 85	Val	Arg	Asp	Val	Arg 90	Leu	Ile	Ser	Ala	Lys 95	Thr
Gly	Tyr	Gly	Val 100	Glu	Glu	Leu	Ile	Ser 105	Ala	Leu	Gln	Arg	Ser 110	Trp	Arg
Tyr	Arg	Gly 115	Asp	Val	Tyr	Leu	Val 120	Gly	Ala	Thr	Asn	Ala 125	Gly	Lys	Ser
Thr	Leu 130		Asn	Thr	Leu	Leu 135	Glu	Ser	Asp	Tyr	Cys 140	Thr	Ala	Lys	Gly
Ser 145	Glu	Ala	Ile	Asp	Arg 150	Ala	Thr	Ile	Ser	Pro 155	Trp	Pro	Gly	Thr	Thr 160
Leu	Asn	. Leu	. Leu	Lys 165		Pro	Ile	Cys	Asn 170		Thr	Pro	Tyr	Arg 175	Met
Phe	Lys	a Arg	His		Arg	Leu	Lys	Lys 185		Ser	Thr	Gln	Ala 190		Glu

Asp	Leu	Ser 195	Glu	Gln	Glu	Gln	Asn 200	Gln	Leu	Asn	Val	Leu 205	Lys	Lys	His ·
Gly	Tyr 210	Val	Val	Gly	Arg	Val 215	Gly	Arg	Thr	Phe	Leu 220	Tyr	Ser	Glu	Glu
Gln 225	Lys	Asp	Asn	Ile	Pro 230	Phe	Glu	Phe	Asp	Ala 235	Asp	Ser	Leu	Ala	Phe 240
Asp	Met	Glu	Asn	Asp 245	Pro	Val	Met	Gly	Thr 250	His	Lys	Ser	Thr	Lys 255	Gln
Val	Glu	Leu	Thr 260	Ala	Gln	Asp	Val	Lys 265	Asp	Ala	His	Trp	Phe 270	Tyr	Asp
Thr	Pro	Gly 275	Ile	Thr	Lys	Glu	Asn 280	Cys	Ile	Leu	Asn	Leu 285	Leu	Thr	Glu
Lys	Glu 290	Val	Asn	Ile	Val	Leu 295	Pro	Thr	Gln	Ser	Ile 300	Val	Pro	Arg	Thr
Phe 305	Val	Leu	Lys	Pro	Gly 310	Met	Val	Leu	Phe	Leu 315	Gly	Ala	Ile	Gly	Arg 320
Ile	Asp	Phe	Leu	Gln 325	Gly	Asn	Gln	Ser	Ala 330	Trp	Phe	Thr	Val	Val 335	Ala
Ser	Asn	Ile	Leu 340	Pro	Val	His	Ile	Thr 345	Ser	Leu	Asp	Arg	Ala 350	Asp	Ala
Leu	Tyr	Gln 355	Lys	His	Ala	Gly	His 360	Thr	Leu	Leu	Gln	Ile 365	Pro	Met	Gly
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Met	Pro	Leu	Pro 20	Val	Ala	Leu	Gln	Thr 25	Arg	Leu	Ala	Lys	Arg 30	Gly	Ile.
Leu	Lys	His 35	Leu	Glu	Pro	Glu	Pro 40	Glu	Glu	Glu	Ile	Ile 45	Ala	Glu	Asp
Tyr	Asp 50	Asp	Asp	Pro	Val	Asp 55	Tyr	Glu	Ala	Thr	Arg 60	Leu	Glu	Gly	Leu
Pro 65	Pro	Ser	Trp	Tyr	Lys 70	Val	Phe	Asp	Pro	Ser 75	Cys	Gly	Leu	Pro	Tyr 80
Tyr	Trp	Asn	Ala	Asp 85	Thr	Asp	Leu	Val	Ser 90	Trp	Leu	Ser	Pro	His 95	Asp
Pro	Asn	Ser	Val	Val	Thr	Lys	Ser	Ala	Lys	Lys	Leu	Arg	Ser	Ser	Asn

			100					105					110		
Ala	Asp	Ala 115	Glu	Glu	Lys	Leu	Asp 120	Arg	Ser	His	Asp	Lys 125	Ser	Asp	Arg
Gly	His 130	Asp	Lys	Ser	Asp	Arg 135	Ser	His	Glu	Lys	Leu 140	Asp	Arg	Gly	His
Asp 145	Lys	Ser	Asp	Arg	Gly 150	His	Asp	Lys	Ser	Asp 155	Arg	Asp	Arg	Glu	Arg 160
Gly	Tyr	Asp	Lys	Ser 165	Arg	Asn	Gly	Ile	Arg 170	Asp	Arg	Gly	Tyr	Asp 175	Gln
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Arg	Val	Tyr	Trp 20	Ser	Val	Cys	Tyr	Gln 25	Leu	Cys	Arg	Cys	Pro 30	Leu	Arg
Cys	Arg	Pro 35	Ala	Trp	Pro	Arg	Glu 40	Ala	Ser	Ser	Asn	Ile 45	Trp	Ser	Leu
Asn	Gln 50	Arg	Lys	Arg	Ser	Leu 55	Pro	Arg	Thr	Met	Thr 60	Met	Ile	Leu	Trp
Thr 65	Thr	Arg	Pro	Pro	Gly 70	Trp	Arg	Ala	Tyr	His 75	Gln	Ala	Gly	Thr	Arg 80
Cys	Ser	Thr	Leu	Pro 85	Ala	Gly	Ser	Leu	Thr 90	Thr	Gly	Met	Gln	Thr 95	Gln
Thr	Leu	Tyr	Pro 100	Gly	Ser	Pro	His	Met 105	Thr	Pro	Thr	Pro	Trp 110	Leu	Pro
Asn	Arg	Pro 115	Arg	Ser	Ser	Glu	Ala 120	Val	Met	Gln	Met	Leu 125	Lys	Lys	Ser
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Ser	Trp	Pro	Leu 20	Ser	Ser	Phe	Ser	Trp 25	Leu	Arg	Ser	Asp	Leu 30	Ser	Trp ·
Pro	Leu	Ser 35	Asp	Leu	Ser	Trp	Leu 40	Arg	Ser	Asn	Phe	Ser 45	Ser	Ala	Ser
Ala	Leu 50	Leu	Leu	Leu	Ser	Phe 55	Leu	Ala	Asp	Leu	Val 60	Thr	Thr	Glu	Leu
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Thr	Pro	Asn	His 20	Val	Glu	Phe	Ser	Arg 25	Leu	Tyr	Asp	Ala	Val 30	Leu	Arg
Gly	Pro	Met 35	Asp	Ser	Asp	Asp	Ser 40	His	Gly	Ser	Val	Leu 45	Arg	Leu	Ser
Gln	Ala 50	Leu	Gly	Asn	Val	Thr 55	Val	Val	Gln	Lys	Gly 60	Glu	Arg	Asp	Ile
Leu 65	Ser	Asn	Gly	Gln	Gln 70	Val	Leu	Val	Cys	Ser 75	Gln	Glu	Gly	Ser	Ser 80
Arg	Arg	Cys	Gly	Gly 85	Gln	Gly	Asp	Leu	Leu 90	Ser	Gly	Ser	Leu	Gly 95	.Val
Leu	Val	His	Trp 100	Ala	Leu	Leu	Ala	Gly 105	Pro	Gln	Lys	Thr	Asn 110	Gly	Ser
Ser	Pro	Leu 115	Leu	Val	Ala	Ala	Phe	Gly	Ala	Cys	Ser	Leu 125	Thr	Arg	Gln
Cys	Asn 130	His	Gln	Ala	Phe	Gln 135	Lys	His	Gly	Arg	Ser 140	Thr	Thr	Thr	Ser
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Thr	Leu	Ser 35	Pro	Val	Gln	Gly	Ala 40	Cys	Leu	Leu	Leu	Val 45	Cys	Ala	Gly .
Ser	Gly 50	Phe	Lys	Glu	Leu	Ala 55	Glu	Gly	Gly	Pro	His 60	Leu	Gly	Asp	His
Val 65	Gly	Gly	Gly	Gly	Gly 70	Ala	Thr	Val	Leu	Leu 75	Glu	Gly	Leu	Val	Val 80
Ala	Leu	Pro	Gly	Glu 85	Arg	Ala	Gly	Ala	Lys 90	Arg	Gly	His	Gln	Glu 95	Arg
Ala	Gly	Pro	Ile 100	Cys	Phe	Leu	Trp	Ser 105	Ser	Lys	Glu	Arg	Pro 110	Val	Tyr
Gln	Asp	Ala 115	Gln	Gly	Ala	Arg	Gln 120	Glu	Val	Pro	Leu	Pro 125	Ser	Thr	Pro
Ala	Ala 130	Ala	Ala	Phe	Leu	Ala 135	Ala	His	Lys	His	Leu 140	Leu	Ala	Val	Gly
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Lys 1	Ser Pro	Ser	His 20	5	Arg	Ser	Pro	Pro 25	10 Ser	Lys		Pro	Val 30	15 Tyr	Phe
Lys 1 Phe	Ser Pro	Ser Ala 35	His 20 Arg	5 Thr	Arg Gln	Ser Val	Pro Ser 40	Pro 25 Lys	Ser	Lys Leu	Val Leu	Pro Lys 45	Val 30 Ala	15 Tyr	Phe
Lys 1 Phe Trp	Ser Pro Ser	Ser Ala 35 Ala	His 20 Arg	5 Thr Ala Met	Arg Gln Ser	Ser Val Glu 55	Pro Ser 40	Pro 25 Lys Val	Ser	Lys Leu Glu	Val Leu Arg 60	Pro Lys 45	Val 30 Ala	15 Tyr Ala Phe	Phe Pro Trp
Lys 1 Phe Trp Thr	Ser Pro Ser Ser 50	Ser Ala 35 Ala Trp	His 20 Arg Ile Trp	5 Thr Ala Met Leu	Arg Gln Ser His	Ser Val Glu 55 Cys	Pro Ser 40	Pro 25 Lys Val	Ser Ser Val	Lys Leu Glu	Val Leu Arg 60	Pro Lys 45 Pro	Val 30 Ala Cys	15 Tyr Ala Phe	Phe Pro Trp Ala 80
Lys 1 Phe Trp Thr Lys 65	Ser Pro Ser Ser 50	Ser Ala 35 Ala Trp Arg	His 20 Arg Ile Trp	5 Thr Ala Met Leu Gly 85	Arg Gln Ser His 70 Leu	Ser Val Glu 55 Cys Asp	Pro Ser 40 Val	Pro 25 Lys Val Val	Ser Val Arg Val 90	Lys Leu Glu Glu 75 Phe	Val Leu Arg 60	Pro Lys 45 Pro Ala	Val 30 Ala Cys Pro	Tyr Ala Phe Asn Ala 95	Phe Pro Trp Ala 80 Arg
Lys 1 Phe Trp Thr Lys 65 Ala	Ser Pro Ser Ser 50 Ala Thr	Ser Ala 35 Ala Trp Arg Gln	His 20 Arg Ile Trp Arg Cys 100	5 Thr Ala Met Leu Gly 85	Arg Gln Ser His 70 Leu Arg	Ser Val Glu 55 Cys Asp	Pro Ser 40 Val Leu Pro	Pro 25 Lys Val Val Phe	Ser Val Arg Val 90	Lys Leu Glu 75 Phe	Val Leu Arg 60 Gln Cys	Pro Lys 45 Pro Ala Gly Arg	Val 30 Ala Cys Pro Pro	Tyr Ala Phe Asn Ala 95 Ser	Phe Pro Trp Ala 80 Arg
Lys 1 Phe Trp Thr Lys 65 Ala	Ser Pro Ser Ser 50 Ala Thr	Ser Ala 35 Ala Trp Arg Gln Pro 115	His 20 Arg Ile Trp Arg Cys 100 His	Thr Ala Met Leu Gly 85 Thr	Arg Gln Ser His 70 Leu Arg	Ser Val Glu 55 Cys Asp Thr	Pro Ser 40 Val Leu Pro Pro	Pro 25 Lys Val Val Phe Arg 105	Ser Val Arg Val 90 Glu	Lys Leu Glu 75 Phe Pro	Val Leu Arg 60 Gln Cys Asp Leu	Pro Lys 45 Pro Ala Gly Arg His 125	Val 30 Ala Cys Pro Pro Arg 110	Tyr Ala Phe Asn Ala 95 Ser	Phe Pro Trp Ala 80 Arg Pro

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TYL	GIU	Arg	20	116	Arg	vai	vai	25	Ala	Arg	vai	116	30	FIIC	
Trp	Ala	Trp 35	Arg	Ala	Ile	Thr	Tyr 40	Ile	Trp	Leu	Tyr	Ser 45	Leu	Ala	Trp
Ala	Gly 50	Ala	Pro	Leu	Leu	Gly 55	Trp	Asn	Arg	Tyr	Ile 60	Leu	Asp	Val	His
Gly 65	Leu	Gly	Cys	Thr	Val 70	Asp	Trp	Lys	Ser	Lys 75	Asp	Ala	Asn	Asp	Ser 80
Ser	Phe	Val	Leu	Phe 85	Leu	Phe	Leu	Gly	Cys 90	Leu	Val	Val	Pro	Leu 95	Gly
Val	Ile	Ala	His 100	Cys	Tyr	Gly	His	Ile 105	Leu	Tyr	Phe	His	Ser	Asn	Ala
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Ser	Thr	Ser 35	Pro	Gly	Met	Glu	Gln 40	Val	His	Pro	Gly	Arg 45	Thr	Arg	Thr
Arg	Leu 50	His	Cys	Gly	Leu	Glu 55	Ile	Gln	Gly	Cys	Gln 60	Arg	Phe	Leu	Leu
Cys 65	Ala	Phe	Leu	Ile	Ser 70	Trp	Leu	Pro	Gly	Gly 75	Ala	Pro	Gly	Cys	His 80
Ser	Pro	Leu	Leu	Trp 85	Pro	Tyr	Ser	Ile	Phe 90	Pro	Phe	Glu	Cys	Phe 95	Val
Gly	Val	Glu	Asp 100	Leu	Gln	Thr	Ile	Gln 105	Val	Ile	Lys	Ile	Leu 110	Lys	Tyr
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Pro	Ser	Ile 35	Leu	Asp	Gly	Leu	Ile 40	His	Leu	Ala	Ala	Gln 45	Phe	Ser	Ser
Glu	Val 50	Leu	Asn	Leu	Val	Met 55	Glu	Thr	Leu	Cys	Ile 60	Val	Cys	Thr	Val
Asp 65	Pro	Glu	Phe	Thr	Ala 70	Ser	Met	Glu	Ser	Lys 75	Ile	Cys	Pro	Phe	Thr 80
Ile	Ala	Ile	Phe	Leu 85	Lys	Tyr	Ser	Asn	Asp 90	Pro	Val	Val	Ala	Ser 95	Leu
Ala	Gln	Asp	Ile 100	Phe	Lys	Glu	Leu	Ser 105	Gln	Ile	Glu	Ala	Cys 110	Gln	Gly
Pro	Met	Gln 115	Met	Arg	Leu	Ile	Pro 120		Leu	Val	Ser	Ile 125	Met	Gln	Ala
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Val	Gln	Asn 35	Gly	Gly	Glu	Cys	Leu 40	Arg	Ala	Tyr	Val	Ser 45	Val	Thr	Leu
Glu	Gln 50		Ala	Gln	Trp	His 55	Asp	Glu	Gln	Gly	His 60	Asn	Gly	Leu	Trp
Tyr 65		Met	Gln	Val	Val 70	Ser	Gln	Leu	Leu	Asp 75	Pro	Arg	Thr	Ser	Glu 80
Phe	. Thr	· Ala	Ala	Phe 85	Val	Gly	Arg	Leu	Val 90	Ser	Thr	Leu	Ile	Ser 95	Lys

Ala	Gly	Arg	Glu 100	Leu	Gly	Glu	Asn	Leu 105	Asp	Gln	Ile	Leu	Arg 110	Ala	Ile .
Leu	Ser	Lys 115	Met	Gln	Gln	Ala	Glu 120	Thr	Leu	Ser	Val	Met 125	Gln	Ser	Leu
Ile	Met 130	Val	Phe	Ala	His	Leu 135	Val	His	Thr	Gln	Leu 140	Glu	Pro	Leu	Leu
Glu 145	Phe	Leu	Cys	Ser	Leu 150	Pro	Gly	Pro	Thr	Gly 155	Lys	Pro	Ala	Leu	Glu 160
Phe	Val	Met	Ala	Glu 165	Trp	Thr	Ser	Arg	Gln 170	His	Leu	Phe	Tyr	Gly 175	Gln
Tyr	Glu	Gly	Lys 180	Val	Ser	Ser	Val	Ala 185	Leu	Cys	Lys	Leu	Leu 190	Gln	His
Gly	Ile	Asn 195	Ala	Asp	Asp	Lys	Arg 200	Leu	Gln	Asp	Ile	Arg 205	Val	Lys	Gly
Glu	Glu 210	Ile	Tyr	Ser	Met	Asp 215	Glu	Gly	Ile	Arg	Thr 220	Arg	Ser	Lys	Ser
Ala 225	Lys	Asn	Pro	Glu	Arg 230	Trp	Thr	Asn	Ile	Pro 235	Leu	Leu	Val	Lys	Ile 240
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Lys 65	Leu	Gly	Arg												
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Ile	Cys	Val	Lys 20	Gly	Thr	Leu	Cys	His 25	Ser	Arg	Glu	Ser	Leu 30	Ala	Asp
Glu	Lys	Leu 35	Gly	Lys	Gly	Arg	Leu 40	Cys	Ile	Ser	Tyr	Tyr 45	Cys	Cys	Gln
Asp	Ile 50	Asn	Gly	Cys	Arg	Thr 55	Lys	Pro	Cys	Arg	Asn 60	Leu	Val	Cys	Trp
Gly 65	Leu	His	Tyr	Ala	Asp 70	Gln	Ser	Gly	Asn	Gln 75	Pro	His	Leu	His	Trp 80
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Lys	Tyr	Leu 35	Cys	Pro	Phe	Lys	Ile 40	Lys	Gly	Ser	Pro	Tyr 45	Gln	Asp	Pro
Cys	Ser 50	Leu	Thr	Asn	Ala	Gly 55	Lys	Gln	Val	Cys	His 60	Ser	Trp	Asn	Glu
Val 65	Val	Trp	Thr	Thr	Glu 70	Tyr	Gln	Gly	Trp	Thr 75	Ser	Ser	Thr	Gly	Gly 80
Cys	Met	Ser	Leu	Lys 85	Pro	Tyr	Ile	His	Phe 90	Thr	Lys	Glu	Ser	Thr 95	Pro
His	Asn	Cys	Gln 100	Tyr	Asn	Gln	Cys	Asn 105	Pro	Val	Gln	Ile	Ser 110	Ile	Leu

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Glu	Lys	Ala	Thr												
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Glu	Ala	Thr 35	Arg	Asn	Ala	Ser	Ser 40	Leu	His	Leu	Ala	Val 45	Ser	Ala	Arg
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Val	Asn	Thr	Val 20	Ser	Leu	Gly	Ser	Thr 25	Lys	His	Pro	Ile	Thr 30	Gln	Phe
Cys	Phe	Ile 35	Val	Trp	Thr	Pro	Ser 40	Arg	Leu	Gln	Gly	His 45	His	Gly	Gln
Glu	Val 50	Cys	Glu	Glu	Val	Cys 55	Gly	Phe	Leu	Val	Leu 60	Ala	Leu	Thr	Ala
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Trp	Asp	Pro	Gln	Tyr 85	Leu	Arg	His	His	Arg 90	Gly	Arg	Glu	Gly	Asp 95	Arg
Asn	Arg	Asn	Arg 100	Val	Met	His	Phe	Phe 105	Pro	His					
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Trp

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Ala Leu Ala Leu Ser Ser Thr Phe Pro Phe Lys Ser Asn Leu Cys
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Arg Leu Asp Pro Ser Leu Thr Ser Pro Phe Leu Lys Pro Val Ser Phe 35

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Glu Met Thr Cys Ala Ser Pro Ile Leu Arg Leu Phe Phe Thr Val His 45 40 35

Lys Pro Lys Gln Ala Val Gly Phe His Lys Ser Ile Tyr Val Gly

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Ser	Leu	Lys 35	Val	Val	Pro	Leu	Cys 40	Ser	Tyr	Ser	Thr	Glu 45	Glu	Met	Ile
His	Ile 50	Pro	Ile	Ile	Asp	Met 55	Val	Ser	Gln	Ser	Glu 60	Glu	Ser	Phe	Arg
Arg 65	Leu	His	Lys	Tyr	Val 70	Leu	Cys	Thr	Cys	Pro 75	Met	Leu	Gly	Asn	Arg 80
Lys	Ile	Ile	Val	Ile 85	Asp	Lys	Thr								

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<400> 407

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Tyr	Val	Gln	Leu 20	Trp	Leu	Val	Leu	Arg 25	Tyr	Arg	His	Lys	Arg 30	Leu	Ser
Tyr	Gln	Ser 35	Val	Phe	Leu	Phe	Leu 40	Cys	Leu	Phe	Trp	Ala 45	Ser	Arg	Arg
Thr	Val 50	Leu	Phe	Ser	Phe	Tyr 55	Phe	Lys	Asp	Phe	Val 60	Ala	Ala	Asn	Ser
Leu 65	Ser	Pro	Phe	Val	Phe 70	Trp	Leu	Leu	Tyr	Cys 75	Phe	Pro	Val	Cys	Leu 80
Gln	Phe	Phe	Thr	Leu 85	Thr	Leu	'Met	Asn	Leu 90	Tyr	Phe	Thr	Gln	Val 95	Ile
Phe	Lys	Ala	Lys 100	Ser	Lys	Tyr	Ser	Pro 105	Glu	Leu	Leu	Lys	Tyr 110	Arg	Leu
Pro	Leu	Tyr 115	Leu	Ala	Ser	Leu	Phe 120	Ile	Ser	Leu	Val	Phe 125	Leu	Leu	Val
Asn	Leu 130	Thr	Cys	Ala	Val	Leu 135	Val	Lys	Thr	Gly	Asn 140	Trp	Glu	Arg	Lys
Val 145	Ile	Val	Ser	Val	Arg 150	Val	Ala	Ile	Asn	Asp 155	Thr	Leu	Phe	Val	Leu 160
Суз	Ala	Val	Ser	Leu 165		Ile	Cys	Leu	Tyr 170		Ile	Ser	Lys	Met 175	Ser
Leu	. Ala	Asn	. Ile 180	-	Leu	Glu	Ser	Lys 185		Ser	Ser	Val	Cys 190		Val
Thr	: Ala	Ile	e Gly	val	Thr	Val	Ile	. Leu	ı Lev	Tyr	Thr	Ser	Arg	Ala	Cys

. 23

		195					200					205			
Tyr	Asn 210	Leu	Phe	Ile	Leu	Ser 215	Phe	Ser	Gln	Asn	Lys 220	Ser	Val	His	Ser
Phe 225	Asp	Tyr	Asp	Trp	Tyr 230	Asn	Val	Ser	Asp	Gln 235	Ala	Asp	Leu	Lys	Asn 240
Gln	Leu	Gly	Asp	Ala 245	Gly	Tyr	Val	Leu	Phe 250	Gly	Val	Val	Leu	Phe 255	Val
Trp	Glu	Leu	Leu 260	Pro	Thr	Thr	Leu	Val 265	Val	Tyr	Phe	Phe	Arg 270	Val	Arg
Asn	Pro	Thr 275	Lys	Asp	Leu	Thr	Asn 280	Pro	Gly	Met	Val	Pro 285	Ser	His	Gly
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Pro	Glu	Arg 35	Leu	Pro	Leu	Ser	Leu 40	Pro	Leu	Leu	Gly	Leu 45	Pro	Ala	Asp
Arg	Pro 50	Leu	Leu	Leu	Leu	Leu 55	Gln	Arg	Leu	Arg	Gly 60	Gly	Gln	Phe	Ala
Gln 65	Pro	Leu	Arg	Leu	Leu 70		Ala	Leu	Leu	Leu 75	Pro	Cys	Val	Pro	Ala 80
Val	Phe	His	Pro	His 85	Ala		Glu	Leu	Val 90	Leu	His	Ala	Gly	Asp 95	Phe
Gln	Ser	Gln	Val 100	Lys	Ile	Phe	Ser	Arg 105	Ile	Thr	Gln	Ile	Pro 110	Val	Ala
Pro	Leu	Pro 115	Gly	Leu	Pro	Leu	His 120	Gln	Pro	Cys	Phe	Pro 125	Val	Gly	Glu
Phe	Asn 130	Leu	Cys	Cys	Ala	Gly 135	Lys	Asp	Gly	Lys	Leu 140	Gly	Glu	Glu	Gly
Tyr 145	_	Leu	Cys	Ala	Ser 150		His								
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Gly Glu 50 Ala Leu Asp :10 :68 PRT :10 :100	Ala 35 Asp Leu His Gly	Glu Gly Val Val Glu 100	Arg Pro Ala Asp 85	Ile Pro Glu 70 Glu	Gly Gly 55 Pro	Arg 40 Gly Leu	His Pro Val	Glu Ala Gln	Glu Val 75	Ala 60 Thr	45 Glu Gln	Val Lys His	Glu Gln Gly	Glu Pro 80
Glu 50 Ala Leu Asp :10 :68 PRT nomo	Asp Leu His Gly	Gly Val Val Glu 100	Pro Ala Asp 85	Pro Glu 70 Glu	Gly 55 Pro	40 Gly Leu	Pro Val	Glu Ala Gln	Glu Val 75	Ala 60 Thr	45 Glu Gln	Lys His	Glu Gln Gly	Glu Pro 80
Ala Leu Asp 10 68 PRT 10000	Leu His Gly	Val Val Glu 100	Ala Asp 85	Glu 70 Glu	55 Pro	Leu	Val	Ala Gln	Val 75	60 Thr	Gln	His	Gln Gly	Pro 80
Leu Asp 10 668 PRT nomo	His Gly sapie	Val Glu 100	Asp 85	70 Glu				Gln	75				Gly	80
Asp :10 :68 PRT :10000	Gly	Glu 100	85 Ser		His	Glu	Glu	Gln 90	Arg	Val	Glu	His		Val
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268 PRT 10MO														
10				_										
Pro	Ile	Ser		-										
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Gln	Leu	Lys 20	Val	Ser	Glu	Ser	Thr 25	His	Val	Leu	Gln	Pro 30	Phe	Leu
Ser	Ile 35	Leu	Asp	Gly	Leu	Ile 40	His	Leu	Ala	Ala	Gln 45	Phe	Ser	Ser
Val 50	Leu	Asn	Leu	Val	Met 55	Glu	Thr	Leu	Cys	Ile 60	Val	Cys	Thr	Val
Pro	Glu	Phe	Thr	Ala 70	Ser	·Met	Glu	Ser	Lys 75	Ile	Cys	Pro	Phe	Thr 80
Ala	Ile	Phe	Leu 85	Lys	Tyr	Ser	Asn	Asp 90	Pro	Val	Val	Ala	Ser 95	Leu
Gln	Asp	Ile 100	Phe	Lys	Glu	Leu	Ser 105	Gln	Ile	Glu	Ala	Cys 110	Gln	Gly
Met			Arg	Leu	Ile		Thr	Leu	Val	Ser	Ile 125		Gln	Ala
	_	Lys	Ile	Pro			Leu	Cys	Ala	Thr 140	Ala	Ile	Asp	Ile
	Thr	: Val	. Val	_		Thr	Lys	Pro			Ser	Gln	. Leu	Leu 160
Thr	s Glr	ı Ala) Ala	. Val	. Ala		_	Thr	Leu	His		_
					. Aar	, Gls	r Glv	, Glu	. Cys	Leu	Arg	, Ala	туг	Val
	Met Ala 130	Met Gln 115 Ala Asp 130 Thr Thr	Met Gln Met 115 Ala Asp Lys 130 Thr Thr Val	Gln Asp Ile Phe 100 Met Gln Met Arg 115 Ala Asp Lys Ile 130 Thr Thr Val Val Cys Gln Ala Phe 165	Gln Asp Ile Phe Lys 100 Met Gln Met Arg Leu 115 Ala Asp Lys Ile Pro 130 Thr Thr Val Val Arg 150 Cys Gln Ala Phe Pro 165	Gln Asp Ile Phe Lys Glu 100 Met Gln Met Arg Leu Ile 115 Ala Asp Lys Ile Pro Ala 130 Thr Thr Val Val Arg Asn 150 Cys Gln Ala Phe Pro Ala 165	Gln Asp Ile Phe Lys Glu Leu 100 Met Gln Met Arg Leu Ile Pro 115 Ala Asp Lys Ile Pro Ala Gly 130 Thr Thr Val Val Arg Asn Thr 150 Cys Gln Ala Phe Pro Ala Val 165	Gln Asp Ile Phe Lys Glu Leu Ser 105 Met Gln Met Arg Leu Ile Pro Thr 120 Ala Asp Lys Ile Pro Ala Gly Leu 135 Thr Thr Val Val Arg Asn Thr Lys 150 Cys Gln Ala Phe Pro Ala Val Ala 165	Gln Asp Ile Phe Lys Glu Leu Ser Gln 105 Met Gln Met Arg Leu Ile Pro Thr Leu 120 Ala Asp Lys Ile Pro Ala Gly Leu Cys 130 Thr Thr Val Val Arg Asn Thr Lys Pro 150 Cys Gln Ala Phe Pro Ala Val Ala Gln 170	Gln Asp Ile Phe Lys Glu Leu Ser Gln Ile Met Gln Met Arg Leu Ile Pro Thr Leu Val 115 Ala Asp Lys Ile Pro Ala Gly Leu Cys Ala 130 Thr Thr Val Val Arg Asn Thr Lys Pro Pro 150 Cys Gln Ala Phe Pro Ala Val Ala Gln Cys 165	Gln Asp Ile Phe Lys Glu Leu Ser Gln Ile Glu Met Gln Met Arg Leu Ile Pro Thr Leu Val Ser 115 Ala Asp Lys Ile Pro Ala Gly Leu Cys Ala Thr 130 Thr Thr Val Val Arg Asn Thr Lys Pro Pro Leu 155 Cys Gln Ala Phe Pro Ala Val Ala Gln Cys Thr 165	Gln Asp Ile Phe Lys Glu Leu Ser Gln Ile Glu Ala Met Gln Met Arg Leu Ile Pro Thr Leu Val Ser Ile 125 Ala Asp Lys Ile Pro Ala Gly Leu Cys Ala Thr Ala 130 Thr Thr Val Val Arg Asn Thr Lys Pro Pro Leu Ser 155 Cys Gln Ala Phe Pro Ala Val Ala Gln Cys Thr Leu 170	Gln Asp Ile Phe Lys Glu Leu Ser Gln Ile Glu Ala Cys 110 Met Gln Met Arg Leu Ile Pro Thr Leu Val Ser Ile Met 125 Ala Asp Lys Ile Pro Ala Gly Leu Cys Ala Thr Ala Ile 130 Thr Thr Val Val Arg Asn Thr Lys Pro Pro Leu Ser Gln 155 Cys Gln Ala Phe Pro Ala Val Ala Gln Cys Thr Leu His 170	Gln Asp Ile Phe Lys Glu Leu Ser Gln Ile Glu Ala Cys Gln 110 Met Gln Met Arg Leu Ile Pro Thr Leu Val Ser Ile Met Gln 125 Met Gln 135 Thr Thr Val Val Arg Asn Thr Lys Pro Pro Leu Ser Gln Leu Cys Gln Ala Phe Pro Ala Val Ala Gln Cys Thr Leu His Thr 175

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Ser	Val	Thr 195	Leu	Glu	Gln	Val	Ala 200	Gln	Trp	His	Asp	Glu 205	Gln	Gly	His
Asn	Gly 210	Leu	Trp	Tyr	Val	Met 215	Gln	Val	Val	Ser	Gln 220	Leu	Leu	Asp	Pro
Arg 225	Thr	Ser	Glu	Phe	Thr 230	Ala	Ala	Phe	Val	Gly 235	Ala	Phe	Val	Ser	Thr 240
Leu	Ile	Ser	Lys	Ala 245	Gly	Arg	Glu	Leu	Gly 250	Glu	Asn	Leu	Asp	Gln 255	Ile
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Ile	Cys	Val	Lys 20	Gly	Thr	Leu	Cys	His 25	Ser	Arg	Glu	Ser	Leu 30	Ala	Asp
Glu	Lys	Leu 35	Gly	Lys	Gly	Arg	Leu 40	Cys	Ile	Ser	Tyr	Tyr 45	Cys	Cys	Gln
Asp	Ile 50	Asn	Gly	Cys	Arg	Thr 55	Lys	Pro	Cys	Arg	Asn 60	Leu	Val	Cys	Trp
Gly 65	Leu	His	Tyr	Ala	Asp 70	Gln	Ser	Gly	Asn	Gln 75	Pro	His	Leu	His	Trp 80
Ala	Leu	Thr	Gly	Phe 85	Asn	Leu	Gly	Gln	Leu 90	Leu	Glu	Asp	Val	Leu 95	Ser
Gln															
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Phe	Ser	Pro	Ser 20	Ser	Arg	Pro	Ala	Leu 25	Glu	Met	Arg	Val	Glu 30	Thr	Lys
Ala	Pro	Thr 35	Lys	Ala	Ala	Val	Asn 40	Ser	Glu	Val	Arg	Gly 45	Ser	Arg	Ser
Trp	Leu 50	Thr	Thr	CÀa	Ile	Thr 55	Tyr	His	Ser	Pro	Leu 60	Trp	Pro	Cys	Ser

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Ser Cys His Trp Ala Thr Cys Ser Arg Val Thr Asp Thr 70 65 <210> 413 <211> 62 <212> PRT <213> homo sapiens <400> 413 Ile Pro Pro Arg Ile Ser Gly Ser Pro Ile Ser Phe Ala Ser Ile Gly 15 10 5 Val Pro Gly Pro Lys Leu Pro Pro Ser Pro His Phe Tyr Leu Ala 30 25 20 Ile Phe Lys Ser Arg Pro Lys Phe Arg Thr Glu Ala Arg Leu Cys Leu 40 Gly Gly Phe Ile Leu Asp Gln Lys Asn Lys Asn Lys 60 55 <210> 414 <211> 65 <212> PRT <213> homo sapiens <400> 414 Ser Ser Asp Leu Ser Phe Pro Ile Tyr Asn Tyr Tyr Cys Tyr Asp 15 10 Val Phe Asn Asn His Ser Ser Ile Ser Arg Ala Ile Ile Asp Val Ala 30 25 20 Thr Ser Ser Leu Glu Phe Leu Leu Arg Met Ile Leu Met Ala Leu Pro 45 40 35 Arg Ile Ala Tyr Thr Ser Thr Thr Tyr Pro Gln Pro Pro Asn Glu 60 55 Lys 65 <210> 415 <211> 94 <212> PRT <213> homo sapiens <400> 415 Pro Phe His His Val Phe Pro Asp Pro His Pro Ser Ser Leu Leu Asp 10 5 1 Gly Cys Gln Trp Arg His Arg Ser Leu Ile Thr Arg Trp Leu Phe Phe 30 25 20 Phe Tyr Leu Gly Glu Asn Gln Asn Gly Lys Pro Arg Pro Val Tyr 45 40 35 Glu Asp Ser Ser Leu Thr Lys Lys Ile Lys Lys Ile Lys Asn Gly 60 55

Thr Lys Lys Phe Met Phe Leu Tyr Cys Ile Pro Lys Glu Cys Leu Tyr 80 . 75 65 Ile Ile Leu Lys Glu Asn Thr Ser Met Leu Asp Ile Thr Val 85 <210> 416 <211> 83 <212> PRT <213> homo sapiens <400> 416 Gln Leu Asn Leu His Ile Pro Gln Ala Gly Pro Gly Arg Arg Asn Asp Ile Ser Gly Tyr Arg Leu Gly Trp Pro Leu Leu Ser Phe Ala Gly Pro 20 Trp Leu Val Leu His Val Ser Ile Lys Leu Lys Val Pro Asp 40 35 Glu Asn Gln Pro His Pro Ala Ser Trp Pro Gly Pro Trp Pro Pro 60 55 50 Trp Gly Arg Asp Phe Gly Leu Ser Glu Gln Leu Leu Glu Ala Glv 75 70 65 Ala His Asp <210> 417 <211> 93 <212> PRT <213> homo sapiens <400> 417 Lys Ala Ser Ile Ile Ala Phe Lys Gly Ile Leu Leu Thr Leu Arg Ser Gln Ser Ala Arg Glu Pro Ile Leu Ile Ser Ser Val Gln Gly 30 25 Leu Asp Asn Val Lys Trp Phe Leu Glu Glu Asn Pro Lys Met 45 40 Gly His Leu Tyr Leu Phe Ala Lys Ser Met Trp Leu Gly Val Arq Ser 55 Leu Gly Ala Glu Val Ser Gln Leu Glu Phe Ile Asn Ser Cys Ser Leu 75 70 65 Lys Pro Val His Ser Arg Ile Gln Trp His Ile Phe 85 <210> 418 <211> 96 <212> PRT <213> homo sapiens <400> 418

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Leu	Ala	Gly 35	Pro	Thr	Arg	Pro	His 40	Ser	Phe	Phe	His	Leu 45	Gly	Pro	Val
His	Gly 50	Gly	Cys												
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Leu	His	Pro	Lys 20	Gln	Ile	Glu	Val	Ser 25	Gln	Val	Lys	Pro	His 30	Arg	Met
Ala	Asn	Arg 35	Cys	Leu	Gly	Cys	Arg 40	Met	Gln	Val	Arg	Gly 45	Pro	Gly	Pro
Val	Trp 50	Leu	Pro												
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Leu	Gln	Thr	Val 20	Lys	Phe	Cys	Phe	Gly 25	Leu	Val	Ser	Pro	Asp 30	Pro	Pro
Arg	Gln	Glu 35	Leu	Pro	Leu	Pro	Pro 40	Tyr	Leu	Pro	Ala	Leu 45	Lys	Leu	Cys
Pro	Ile 50	Lys	Leu	Asp	Thr	Asn 55	Leu	Thr	Gly	Phe					
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Asp	Leu	Cys	Asn	Ile	Ser	Ser	Leu	Asn	Phe	His	Thr	Ile	Leu	Lys	Cys

Lys

30 25 20 Ser Lys Gly Ala Leu His Leu Leu Thr Pro Phe Cys Lys Leu Leu Gly 45 40 35 Gln Ile Gly Ser Glu Ala Val Ser Ser Gly His Thr Trp Pro Lys Leu 55 Ile Leu Val Thr Tyr Asn Phe Val Leu Gly Asp Val Trp Val Leu 70 <210> 425 <211> 102 <212> PRT <213> homo sapiens <400> 425 Ser Tyr Ser Gly Val Thr Val Cys Ser Tyr Asp Thr Ser His Lys Lys 15 5 Phe Asn Arg Gln Lys Ala Gly Glu Val Ile Cys Arg Leu Ile Ile 25 20 Leu Ser Lys Leu Trp Glu Arg Arg Gln Val Gly Lys Gly Gln Leu Thr 40 Leu Gln Cys Thr Lys Phe Tyr Gln Ser Lys Arg Gly Asn Gly Gly Ile 55 Val Ile Pro His Gly Lys Cys Ser Met Ala Ile Ile Ile Ser Phe Asn 80 75 70 65 Met Val Glu Gly Thr Lys Ser Phe Pro Phe Val Ser Arg Leu Asp 90 85 Gly Ile Asn Pro Thr Ile 100 <210> 426 <211> 81 <212> PRT <213> homo sapiens <400> 426 Pro Val Phe Gly Thr Gln Pro Arg Arg Phe Gln Phe Ser Met Pro 15 10 Ala Ser Ser Ser Pro Gly Leu Glu Ile Glu Leu Gly Ser Gly Asp Ser 25 20 Cys Gln Leu Arg Arg Thr Arg ${\tt Pro}$ Ser Gly Glu Met Lys Ala Cys Asn 40 Tyr Thr Val Pro Val Val Thr Ile Thr Asp Leu Cys Gly Ser His Pro 60 55 50 Pro His Glu Met Pro Ala Gln Ser Ser Lys Pro Lys Thr Arg Ala 75 70 65

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Ser	Gly	Leu	Tyr 20	Ile	Leu	Ala	Ala	Leu 25	Ser	Thr	Ser	Ser	Ser 30	Ile	Gly
Ser	Ser	Gly 35	Gly	Arg	Gly	Asn	Trp 40	Gln	Gln	Val	Gly	Asn 45	Tyr	Val	Lys
Glu	Ser 50	Pro	Asp	Val	Ile	Ile 55	Ser	Gly	Cys	His	Arg 60	Asn	Ile		•
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Val	Ala	Trp	Leu 20	Val	Thr	Ser	Pro	Ser 25	His	Tyr	Arg	Gln	His 30	Trp	Ser
Ser	Ala	Gln 35	Val	Pro	Ala	Gln	Leu 40	Lys	Asn	Leu	Leu	Leu 45	Pro	Leu	Glu
Thr	Ser 50	Leu	Ala	Gly	Phe	Gln 55	Ile	Glu	Lys	Ala	Tyr 60	Phe	Thr	Glu	Asn
Gln 65	Lys	Arg	Leu	Ser	Leu 70	Ile	Pro	Val	Glu	Val 75	Asn	Lys	Ser	Met	Leu 80
Ser	Thr	Gly	Leu	Ser 85	Thr	Glu	'Gly	Trp	Asn 90		Gln	Arg	Asn	Asp 95	Asp
Gln	Met	Phe	Arg 100												
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Ile	Ser	Tyr	Arg 20	Asn	Gln	Ser	Leu	Leu 25	Lys	Leu	His	Arg	Gly 30	Leu	Lys
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                                                     Phe Lys
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                                       Leu
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                                             10
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                                                                    Gly Arg
                                                          Ile
                                                               Lys
                                                 Thr
                                                      Thr
                         Gly Ile Leu
                                       Pro
                                            Asn
           Ile Gln
                     Val
  Cys His
                                                                30
                                         25
                 20
                                            Tyr Lys Ala Phe Lys Asn Leu
                    Asn Lys Ile Lys Lys
                Asp
           Leu
  Ile Lys
                                    40
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  Thr His His Leu Lys
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                                                                     Pro
                                                           Ile
                                                                Pro
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                      Gln
                                                                      15
                                               10
     1
                                                                     Gly
                                                                          Asn
                                                       Cys
                                                            Ile
                                                                 Arg
                                                  Phe
                               Glu Gly
                                         Lys
                                              Tyr
                           Pro
                 Ser
                      Ser
   Gln Thr
             Ile
                                                                  30
                                          25
                                                                          Leu
                                                                     Thr
                                                       Gln
                                                            Ile
                                                                 Lys
                                              Ile Ser
                      Arg Asn Met
                                    Phe
                                         Phe
                 Glu
       Val
            Leu
    Ser
                                     40
              35
                                                                    Phe
                                                                          Phe
                                                            Ser Ile
                                                       Tyr
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                                    Asn
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Ile	Tyr	Phe	Ser 20	Gly	Gly	Leu	Gln	Ser 25	Thr	Pro	Val	Gly	Arg 30	Cys	Lys
Pro	Tyr	Leu 35	Leu	Gln	Lys	Ala	Asn 40	Thr	Phe	Val	Ser	Glu 45	Glu	Thr	Gln
Phe	Trp 50	Arg	Gly	Ile	Cys	Ser 55	Leu	Tyr	Leu	Lys	Ser 60	Lys	Leu	Ser	Leu
Met 65	Val	Asn	Trp	Leu	Leu 70	Ile	Phe	Leu	Ser	Thr 75	Val	Phe	Phe	Phe	Pro 80
Leu															
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Arg	Cys	Ala	Leu 20	Lys	Ala	Pro	'Thr	Glu 25	Ile	Tyr	Cys	Ile	Ile 30	Asp	Glu
Gly	Lys	Asp 35	Leu	Val	Asn	Phe	Ser 40	Tyr	Gln	Lys	Leu	Val 45	Phe	Arg	Thr
Ser	Cys 50	Pro	Thr	Trp	Leu	Pro 55	Gly	Ala	Gln	Gly	Phe 60	Phe	Ser	Glu	Ile
Val 65		Arg	Asp	Pro	Gln 70	Thr	Cys	Ser	Pro	Ser 75	Pro	Gly	Ala	Thr	Cys 80
Ala	Ser	Ser	Pro	Arg 85	Arg	Gln	Ala	Val	Arg 90	Ser	Met	Arg	Leu	Ser 95	
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Ser	Met	Asp	Pro 20	Gly	Leu	Glu	Gln	Ala 25	His	Leu	His	Leu	Phe 30	His	Leu
Arg	Gln	Cys 35	Gly	Ser	Arg	Cys	Gln 40	Glu	Gly	Leu	Thr	Ser 45	Gly	Pro	Ser
Arg	Phe 50	Leu	Cys	Ala	Arg	Asn 55	Glu	Arg	Pro	Gly	Pro 60	Ile	Leu	Pro	Pro
Arg 65	Leu	Asp	Pro	Glu	Val 70	Arg	Ala	Gly	Gln	Pro 75	Ser	Arg	Lys	His	Thr 80
Val															
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Leu	Lys	Leu	Leu 20	Ser	Ser	Ser	Lys	Ser 25	His	Cys	Gln	Leu	Pro 30	Tyr	Val
Val	Leu	Gly 35	Pro	Arg	Glu	Pro	Trp 40	Asn	Leu	Ala	Pro	Trp 45	Gly	Gly	Leu
Ile	Pro 50	Ala	Arg	Glu	His	Ser 55	Cys	Phe	Ser	Arg	Asp 60	Thr	Val	Ala	Суз
Met 65	Gly	Gln	His	Gly	Pro 70	Trp	Ala	Asp	His	Val 75	His	Ser	Cys	Phe	Ser 80
Gly	Asp	Thr	Val	Gly 85	Pro	His	Gly	Pro	Ala 90	Trp	Thr	Leu	Gly		
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Ser	Ser	Pro	Gly 20		Met	Leu	Ala	His 25	Val	Gly	Pro	Leu	Cys 30		Gln
Arg	g Ser	Arg		. Ala	His	Asp	Gln 40		Arg	y Val	His	Ala 45	_	Pro	Cys
Arg	Pro		. Cys	s Pro	Leu	Arg	•	: Arg	Asr	ı Ala	Leu 60		. Pro	Glu	Leu
Ası 65		s Pro	o Arg	y Val	. Pro	_	, Ser	. Lys	Ala	Pro 75		Asp	Pro	Glu	Pro 80

His	Thr	Glu	Val	Gly	Asn	Gly	Ser	Leu	Met	Ser
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<212> PRT

<213> homo sapiens

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Lys	Lys	Lys	Val 20	Val	Lys	Glu	Pro	Glu 25	Thr	Arg	Tyr	Ser	Val 30	Leu	Asn
Asn	Asp	Asp 35	Tyr	Phe	Ala	Asp	Val 40	Ser	Pro	Leu	Arg	Ala 45	Thr	Ser	Pro
Ser	Lys 50	Ser	Val	Ala	His	Gly 55	Gln	Ala	Pro	Glu	Met 60	Pro	Leu	Val	Lys
Lys 65	Lys	Lys	Lys	Lys	Lys 70	Lys	Gly	Val	Ser	Thr 75	Leu	Cys	Glu	Glu	His 80
Val	Glu	Pro	Glu	Thr 85	Thr	Leu	Pro	Ala	Arg 90	Arg	Thr	Glu	Lys	Ser 95	Pro
Ser	Leu	Arg	Lys 100	Gln	Val	Phe	Gly	His 105	Leu	Glu	Phe	Leu	Ser 110	Gly	Glu
Lys	Lys	Asn 115	Lys	Lys	Ser	Pro	Leu 120	Ala	Met	Ser	His	Ala 125	Ser	Gly	Val
Lys	Thr 130	Ser	Pro	Asp	Pro	Arg 135	Gln	Gly	Glu	Glu	Glu 140	Thr	Arg	Val	Gly
Lys 145	Lys	Leu	Lys	Lys	His 150	Lys	Lys	Glu	Lys	Lys 155	Gly	Ala	Gln	Asp	Pro 160
Thr	Ala	Phe	Ser	Val 165	Gln	Asp	'Pro	Trp	Phe 170	Cys	Glu	Ala	Arg	Glu 175	Ala
Arg	Asp	Val	Gly 180	Asp	Thr	Cys	Ser	Val 185	Gly	Lys	Lys	Asp	Glu 190	Glu	Gln
Ala	Ala	Leu 195	Gly	Gln	Lys	Arg	Lys 200	Arg	Lys	Ser	Pro	Arg 205	Glu	His	Asn
Gly	Lys 210	Val	Lys	Lys	Lys	Lys 215	Lys	Ile	His	Gln	Glu 220	Gly	Asp	Ala	Leu
Pro 225	_	His	Ser	Lys	Pro 230	Ser	Arg	Ser	Met	Glu 235	Ser	Ser	Pro	Arg	Lys 240
Gly	Ser	Lys	Lys	Lys 245		Val	Lys	Val	Glu 250		Pro	Glu	Tyr	Ile 255	Pro
Ile	Ser	· Asp	Asp 260		Lys	Ala	Ser	Ala 265	Lys	Lys	Lys	Met	Lys 270	Ser	ГЛа
Lys	Lys	. Val	. Glu	ı Gln	Pro	Val	Ile	Glu	Glu	Pro	Ala	Leu	Lys	Arg	Lys

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Lys	Lys 290	Lys	Glu	Arg	Glu	Ser 295	Gly	Val	Ala	Gly	Asp 300	Pro	Trp	Lys	Glu
Glu 305	Thr	Asp	Thr	Asp	Leu 310	Glu	Val	Val	Leu	Glu 315	Lys	Lys	Gly	Asn	Met 320
Asp	Glu	Ala	His	Ile 325	Asp	Gln	Val	Arg	Arg 330	Lys	Ala	Leu	Gln	Glu 335	Glu
Ile	Asp	Arg	Glu 340	Ser	Gly	Lys	Thr	Glu 345	Ala	Ser	Glu	Thr	Arg 350	Lys	Trp
Thr	Gly	Thr 355	Gln	Phe	Gly	Gln	Trp 360	Asp	Thr	Ala	Gly	Phe 365	Glu	Asn	Glu
Asp	Gln 370	Lys	Leu	Lys	Phe	Leu 375	Arg	Leu	Met	Gly	Gly 380	Phe	Lys	Asn	Leu
Ser 385	Pro	Ser	Phe	Ser	Arg 390	Pro	Ala	Ser	Thr	Ile 395	Ala	Arg	Pro	Asn	Met 400
Ala	Leu	Gly	Lys	Lys 405	Ala	Ala	Asp	Ser	Leu 410	Gln	Gln	Asn	Leu	Gln 415	Arg
Asp	Tyr	Asp	Arg 420	Ala	Met	Ser	Trp	Lys 425	Tyr	Ser	Arg	Gly	Ala 430	Gly	Leu
Gly	Phe	Ser 435	Thr	Ala	Pro	Asn	Lys 440	Ile	Phe	Tyr	Ile	Asp 445	Arg	Asn	Ala
Ser	Lys 450	Ser	Val	Lys	Leu	Glu 455	Asp								
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Ser	Leu	Leu	Leu 20	Phe	Leu	Pro	Phe	Gln 25	Ser	Trp	Leu	Leu	Asp 30	Asp	Trp
Leu	Leu	Tyr 35	Leu	Leu	Phe	Gly	Leu 40	His	Leu	Phe	Leu	Cys 45	Gly	Gly	Leu
Arg	Val 50	Ile	Thr	Tyr	Gly	Asp 55	Val	Phe	Arg	Ser	Leu 60	Asn	Phe	Asp	Trp
Leu 65	Leu	Phe	Thr	Ser	Phe 70	Pro	Arg	Ala	Ala	Leu 75	His	Gly	Pro	Gly	Gly 80
Leu	Gly	Val	Ala	Trp 85	Glu	Gly	Ile	Ser	Leu 90	Leu	Val	Asp	Phe	Phe 95	Phe
Leu	Leu	His	Leu 100	Pro	Ile	Val	Phe	Ser 105	Gly	Ala	Leu	Pro	Leu 110	Pro	Phe

Leu	Pro	Gln 115	Gly	Cys	Leu	Phe	Leu 120	Ile	Leu	Leu	Pro	His 125			
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Ala	Met	Leu	Gly 20	Leu	Ala	Ile	Val	Leu 25	Ala	Gly	Arg	Leu	Asn 30	Glu	Gly
Asp	Arg	Phe 35	Leu	Lys	Pro	Pro	Ile 40	Ser	Leu	Arg	Asn	Phe 45	Ser	Phe	Trp
Ser	Ser 50	Phe	Ser	Lys	Pro	Ala 55	Val	Ser	His	Trp	Pro 60	Asn	Trp	Val	Pro
Val 65	His	Phe	Leu	Val	Ser 70	Glu	Ala	Ser	Val	Leu 75	Pro	Asp	Ser	Arg	Ser 80
Ile	Ser	Ser	Cys	Lys 85	Ala	Phe	Arg	Leu	Thr 90	Trp	Ser	Met	Cys	Ala 95	Ser
Ser	Met	Leu	Pro 100	Phe	Phe	Ser	Asn	Thr 105	Thr	Ser	Lys	Ser	Val 110	Ser	Val
Ser	Ser	Phe 115	Gln	Gly	Ser	Pro	Ala 120	Thr	Pro	Leu	Ser	Leu 125	Ser	Phe	Phe
Phe	Phe 130	Leu	Phe	Arg	Ala	Gly 135	Ser	Ser	Met	Thr	Gly 140	Cys	Ser	Thr	Phe
Phe 145	Leu	Asp	Phe	Ile	Phe 150	Phe	Phe	Ala	Glu	Ala 155	Leu	Gly	Ser	Ser	Leu 160
Met	Gly	Met	Tyr	Ser 165	Gly	Ala	Ser	Thr	Leu 170	Thr	Gly	Phe	Phe	Leu 175	Leu
Pro	Phe	Leu	Gly 180	Leu	Leu	Ser	Met	Asp 185	Leu	Glu	Gly	Leu	Glu 190	Trp	Pro
Gly	Arg	Ala 195	Ser	Pro	Ser	Trp	Trp 200	Ile	Phe	Phe	Phe	Phe 205	Phe	Thr	Phe
Pro	Leu 210	Cys	Ser	Leu	Gly	Leu 215	Phe	Arg	Phe	Arg	Phe 220	Cys	Pro	Lys	Ala
Ala 225	Cys	Ser	Ser	Ser	Phe 230	Phe	Pro	Thr	Glu	Gln 235	Val	Ser	Pro	Thr	Ser 240

Leu Ala Ser Leu Ala Ser Gln Asn Gln Gly Ser Trp Thr Glu Lys

280

Pro Phe Phe Ser

250

265

Phe Leu Cys

Pro Cys Leu Gly

255

Ser

Phe Leu

285

270

Ser Gly Glu Val

245

Ala

260

Leu Pro Thr Leu Val Ser Ser Ser

Val Gly Ser Trp

Phe	Thr 290	Pro	Glu	Ala	Trp	Asp 295	Met	Ala	Arg	Gly	Asp 300	Phe	Leu	Phe	Phe ·
Phe 305	Ser	Pro	Leu	Arg	Asn 310	Ser	Lys	Trp	Pro	Asn 315	Thr	Cys	Phe	Leu	Arg 320
Leu	Gly	Asp	Phe	Ser 325	Val	Arg	Leu	Ala	Gly 330	Ser	Val	Val	Ser	Gly 335	Ser
Thr	Cys	Ser	Ser 340	Gln	Arg	Val	Leu	Thr 345	Pro	Phe	Phe	Phe	Phe 350	Phe	Phe
Phe	Phe	Thr 355	Arg	Gly	Ile	Ser	Gly 360	Ala	Cys	Pro	Trp	Ala 365	Thr	Leu	Leu
Glu	Gly 370	Asp	Val	Ala	Leu	Lys 375	Gly	Glu	Thr	Ser	Ala 380	Lys			
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Leu	Ser	Val	Asn 20	Gly	Glu	Lys	Ile	Ser 25	Pro	Tyr	Val	Leu	Trp 30	Val	Lys
Cys	Cys	Asn 35	Arg	Leu	Gly	Leu	Ser 40	Asn	Leu	Pro					
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His	Leu	Leu	Leu 20	Tyr	Lys	Leu	Thr	Phe 25	Ile	Asn	Thr	Asn	Lys 30	Arg	Leu
Val	Leu	Ser 35	Gln	Phe	Ile	Cys	His 40	Glu	Pro	Arg	Asn	Asn 45			
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Pro	Asn	Leu	Leu 20	Gln	His	Phe	Thr	His 25	_	Thr	Tyr	Gly	Leu 30		Phe

Ser	Pro	Leu 35	Thr	Asp	Ser	Ser	Ile 40								
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. Leu	Pro	Leu	Thr 20	Ser	Thr	Cys	Ser	Arg 25	Cys	Thr	Lys	Pro	Ser 30	Thr	Ala
Glu	Met	Glu 35	His	Leu	Val	Gln	Ser 40	Trp	Cys	Leu	Leu	Asn 45	Ile	Leu	Met
Leu	Gln 50	Thr	His	Asp	Phe	Lys 55	Trp	Pro	Leu	Gln	Arg 60	Arg	Ser	Val	Asn
Lys 65	Ser	Trp	Asn	Pro	Leu 70	Met	Met	Lys	Cys	Leu 75	Gln	Leu	Ile		
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Arg 1	Leu		Thr 20	5 Ile	Asn	Gln	Tyr	Leu 25	10 Gln	Gln	_	Tyr	Glu	15	Ile
Arg 1 Ala	Leu His Ser	Ile Arg	Thr 20 Asp	5 Ile Gly	Asn Ala	Gln Ser	Tyr Cys 40	Leu 25 Ala	10 Gln Glu	Gln Leu	Val	Tyr Ser 45	Glu 30 Phe	15 Ala	Ile His
Arg 1 Ala Asp	Leu His Ser His	Ile Arg 35	Thr 20 Asp	5 Ile Gly Asn	Asn Ala	Gln Ser Arg 55	Tyr Cys 40	Leu 25 Ala Gln	Gln Glu Met	Gln Leu Ala	Val Val Ser	Tyr Ser 45 Pro	Glu 30 Phe Glu	15 Ala Lys	Ile His Lys
Arg 1 Ala Asp Pro	Leu His Ser His 50	Ile Arg 35 Val	Thr 20 Asp	5 Ile Gly Asn	Asn Ala Pro Glu 70	Gln Ser Arg 55 Pro	Tyr Cys 40	Leu 25 Ala Gln Tyr	Gln Glu Met	Gln Leu Ala Glu 75	Val Val Ser	Tyr Ser 45 Pro	Glu 30 Phe Glu	15 Ala Lys Glu Ala	Ile His Lys
Arg 1 Ala Asp Pro Cys 65 Leu	Leu His Ser His 50	Ile Arg 35 Val Gln Cys	Thr 20 Asp Ala Val	5 Ile Gly Asn Leu Tyr	Asn Ala Pro Glu 70	Gln Ser Arg 55 Pro Val	Tyr Cys 40 . Leu	Leu 25 Ala Gln Tyr	Gln Glu Met Asp	Gln Leu Ala Glu 75 Asp	Val Val Ser 60	Tyr Ser 45 Pro Phe	Glu 30 Phe Glu Ala	15 Ala Lys Glu Ala Ala 95	Ile His Lys His
Arg 1 Ala Asp Pro Cys 65 Leu	Leu His Ser His 50 Gln Arg	Ile Arg 35 Val Gln Cys	Thr 20 Asp Ala Val Thr	5 Ile Gly Asn Leu Tyr 85	Asn Ala Pro Glu 70 Ala	Gln Ser Arg 55 Pro Val	Tyr Cys 40 Leu Pro	Leu 25 Ala Gln Tyr Asn	Gln Glu Met Asp	Gln Leu Ala Glu 75 Asp	Val Val Ser 60 Met	Tyr Ser 45 Pro Phe	Glu 30 Phe Glu Ala Glu	15 Ala Lys Glu Ala Ala 95	Ile His Lys His 80

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Leu	Leu	Leu	Trp 20	Arg	Gly	His	Leu	Lys 25	Ser	Trp	Val	Cys	Asn 30	Met	Arg
Met	Phe	Lys 35	Arg	His	Gln	Leu	Cys 40	Thr	Arg	Cys	Ser	Ile 45	Ser	Ala	Val
Asp	Gly 50	Phe	Val	His	Leu	Leu 55	Gln	Val	Leu	Val	Asn 60	Gly	Asn	Val	Arg
His 65	Gly	Ser	Ala	Ala	Glu 70	Arg	Arg	Ala	Pro	Pro 75	Pro	Thr	Pro	Gln	Ala 80
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Val	Thr	Gln	Ala 20	Cys	Val	Ile	Ser	Leu 25	Trp	Gln	Gln	Val	Gly 30	Gly	Leu
Pro	Gln	Gly 35	Arg	Arg	Trp	Pro	Glu 40	Met	Cys	Phe	Arg	Ser 45	Leu	Thr	His
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Met 65	Glu	Ile													
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Ser	Glu	Trp	Arg 20	Phe	Glu	Phe	His	Val 25		Ala	Ser	His	Thr 30		Thr
Cys	His	His 35		Pro	His	Thr	His 40		Arg	His	Ser	Thr 45		Met	Ser
Gln	Lys 50	_	Phe	Leu	Val	Ser 55		Leu	Lys	Val	Leu 60				
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Gln	Gly	Thr	Ser 20	Phe	Gly	Ser	Trp	Leu 25	Leu	Asn	Val	Val	Ser 30	Gly	Cys
Val	Gly	Asn 35	Asp	Gly	Arg	Phe	Val 40	Cys	Glu	Lys	Leu	Pro 45	His	Gly	Ile
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Cys 65		Glu													
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Gln	Ala	Pro	Arg 20	Gly	Thr	Leu	Val	Phe 25	Ala	Leu	Val	Ile	Ala 30	Leu	Val
Pro	Val	Gly 35	Arg	Glu	Pro	Ser	Ser 40	Gln	Gly	Ser	Gln	Ser 45	Ala	Leu	Gln
Thr	Tyr 50	Glu	Leu	Gly	Ser	Glu 55	Asn	Val	Lys	Val	Pro 60	Ile	Phe	Glu	Glu
Asp 65	Thr	Pro	Ser	Val	Met 70	Glu	Ile	Glu	Met	Glu 75	Glu	Leu	Asp	Lys	Trp 80
Met	Asn	Ser	Met	Asn 85	Arg	Asn	Ala	Asp	Phe 90	Glu	Cys	Leu	Pro	Thr 95	Leu
Lys	Glu	Glu	Lys 100	Glu	Ser	Asn	'His	Asn 105	Pro	Ser	Asp	Ser	Glu 110	Ser	
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Asp	Leu	Lys	Leu 20	Ile	Lys	Phe	Val	Ser 25	Ser	Ser	Ser	Ser	Val 30	Gly	Ser
Leu	Ser	Arg 35	Leu	Pro	Gln	Gly	Leu 40	Leu	Leu	Leu	Glu	Asn 45	Met	Ser	Ala
Ile	Gln 50	Val													

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Phe	Leu	Phe	Met 20	Leu	Phe	Ile	His	Leu 25	Ser	Ser	Ser	Ser	Ile 30	Ser	Ile
Ser	Ile	Thr 35	Glu	Gly	Val	Ser	Ser 40	Ser	Lys	Ile	Gly	Thr 45	Phe	Thr	Phe
Ser	Leu 50	Pro	Ser	Ser	Tyr	Val 55	Cys	Lys	Ala	Leu					
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Pro 1	Ile	Thr	Thr	Cys 5	Ser	Leu	Gly	Asp	Pro 10	Gly	Lys	Asp	Lys	Tyr 15	Thr
Cys	Thr	His	Arg 20	Gly	Arg	Glu	Arg	Cys 25	Val	Gln	Arg	Ile	Cys 30	Ile	Asn
Ile	Leu	Phe 35	Ser	His	Pro	Asp	Met 40	Arg	Ser	Gln	Cys	Cys 45	Met	Met	Lys
Arg	Trp 50	Tyr	Asp	Ser	Thr	Tyr 55	Val	Pro	Ile	Val	Leu 60	Leu	Phe	Leu	Tyr
Phe 65	Leu	Phe	Arg	Ser	Phe 70	Thr	Ile	Gly	Arg	Phe 75	Gln	Lys	His	Ser	Phe 80
His	His	His	Leu	Glu 85	Met	Val	.CA2	Leu	Asn 90	Gly	Asp	Asn	Ser	Arg 95	Ser
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Val	Ala	Ala	Leu 20	Gln	Ser	Pro	Arg	Ala 25	Arg	Ser	Leu	Glu	Asn 30	His	Leu
Leu	Ser	Arg 35	Phe	Phe	Phe	Phe	Leu 40	Arg	Val	Gly	Val	Ser 45	Leu	Cys	Cys

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30 20 25 Leu Glu Ser Ile Phe Phe Glu Lys Pro 40 35 <210> 459 <211> 36 <212> PRT <213> homo sapiens <400> 459 Ile Pro Glu Val Ala Ser Ile His Phe Val Ser Gly Glu Pro Ile Ile 15 10 Ile Asn Gly Leu Val Ala Ile Leu Val Arg Leu Arg Val Leu Cys Arg 25 30 20 Arg Glu Gly Trp 35 <210> 460 <211> 36 <212> PRT <213> homo sapiens <400> 460 Asn Ser Glu Gly Phe Arg Arg Asn Gln Leu Leu Gln Ile Asp Leu Lys 10 Cys Lys Phe Gln Lys Leu His Gln Ser Thr Leu Phe Leu Ser Ile Phe 30 20 25 Gln Val Asn Leu <210> 461 <211> 83 <212> PRT <213> homo sapiens <400> 461 Gly Arg Arg Asn Asp Gln Leu Asn Leu His Ile Pro Gln Ala Gly Pro Ser Ser Gly Ile Tyr Arg Leu Gly Trp Pro Leu Leu Phe Ala Gly Pro 30 25 20 Trp Leu Val Leu His Val Ser Ile Lys Leu Lys Pro Asp 45 40 Pro Gly Glu Asn Gln Pro His Pro Ala Ser Trp Ile Pro Trp Pro Pro 60 50 55 Asp Phe Gly Leu Ser Glu Gln Leu Leu Glu Ala Gly Gln Trp Gly Arg 75 65 70 Ala His Asp <210> 462

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40

35

Val	Tyr	Leu	Pro	Phe	Cys		His	Leu	Ser	Tyr	Ser	Ser	Met	Leu	Phe ·
	50					55					60				
Tyr 65	Asn	Cys	Asp	Ser	Pro 70	Gly	Ser	Leu	Gly	Ala 75	Ile				
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Leu	Pro	Asp 35	Ser	Gln	Glu	Ser	His 40	Asn	Cys	Lys	Ile	Thr 45	Cys	Tyr	Cys
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Arg	Arg	Gln	Ile 20	Thr	Ala	Trp	Lys	Thr 25	Gln	Gly	Arg	Phe	Tyr 30	Arg	Asn
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Lys	Leu	Asp	Phe 20	Leu	Val	Val	His	Ala 25	Ser	Leu	Ser	Leu	Val 30	Thr	Val
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Ala Ala Ala Ser

Trp

100

Gly

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Thr

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Thr	Asn	Leu	Leu	Thr 325	Glu	Glu	Thr	Asp	Ser 330	Phe	Val	Asn	Lys	Leu 335	Asp
Pro	Ser	Lys	Val 340	Phe	Lys	Ser	Lys	Asn 345	Lys	Ile	Val	Ile	Pro 350	Lys	Lys
Lys	Gly	Pro 355	Val	Gln	Pro	Ala	Gly 360	Gly	Gln	Lys	Gly	Pro 365	Ser	Gly	Pro
Ser	Gly 370	Pro	Ser	Thr	Ser	Ser 375	Thr	Ser	Lys	Ser	Ser 380	Ser	Gly	Ser	Gly
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Gly	Leu	Leu 35	Gln	Pro	Ser	Pro	Gly 40	Asp	Asp	Ala	Ser	Ser 45	Ser	Met	Ala
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Thr	Leu	Leu	Leu 20	Phe	Ser	Tyr	Lys	Ile 25	Pro	Asn	Phe	Val	Ile 30	Ile	Leu
Ser	Gly	Ile 35	Thr	Leu	Tyr	Cys	Lys 40	Asn	Ala	Ser	Tyr	Phe 45	Thr	Phe	Lys
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Leu	Phe	Tyr	Tyr 20	Lys	His	Leu	Asp	Lys 25	Gly	His	Leu	Thr	His 30	Phe	Lys
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Pro	Thr	Trp	Ala 20	Asp	Ile	Gln	Pro	Glu 25	Leu	Phe	Ser	Arg	Gly 30	Glu	Trp
Tyr	Trp	Gln 35	Phe	Met	Ala	Glu	Ile 40	His	Ser	Asp	Trp	Leu 45	Glu	Ser	Met
Leu	Tyr 50	Gln	Leu	Leu	Asn	Ile 55	Leu	Ser	Ile	Thr	Leu 60	Ala	Tyr	Cys	Tyr
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Lys	Val	Leu	Pro 20	Lys	Glu	Leu	Tyr	Phe 25	Tyr	Val	Leu	Ser	His 30	Arg	Thr
Gly	Glu	Lys 35	Cys	Ser	Gly	His	Cys 40	Trp	Asp	Leu	Ile	Phe 45	Leu	Gly	Met
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Ser	Leu	His	Arg 20	Asn	Arg	Ala	Gly	Leu 25	Asp	Leu	Pro	Thr	Ile 30	Asp	Thr
Gly	Tyr	Asp 35	Ser	Gln	Pro	Gln	Asp 40	Val	Leu	Gly	Ile	Arg 45	Gln	Leu	Glu
Arg	Pro 50	Leu	Pro	Leu	Thr	Ser 55	Val	Cys	Tyr	Pro	Gln 60	Asp	Leu	Pro	Arg
Pro 65	Leu	Arg	Ser	Arg	Glu 70	Phe	Pro	Gln	Phe	Glu 75	Pro	Gln	Arg	Tyr	Pro 80
Ala	Cys	Ala	Gln	Met 85	Leu	Pro	Pro	Asn	Leu 90	Ser	Pro	His	Ala	Pro 95	Trp
Asn	Tyr	His	Tyr 100	His	Cys	Pro	Gly	Ser 105	Pro	Asp	His	Gln	Val 110	Pro	Tyr
Gly	His	Asp 115	Tyr	Pro	Arg	Ala	Ala 120	Tyr	Gln	Gln	Val	Ile 125	Gln	Pro	Ala
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Val 145	Gln	Lys	Val	Ile	Leu 150	Asn	Tyr	Pro	Ser	Pro 155	Trp	Asp	Gln	Glu	Glu 160 ·
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Ser	Leu	Glu 195	Cys	Pro	Ala	Glu	Leu 200	Arg	Pro	Gln	Val	Pro 205	Gln	Pro	Pro
Ser	Pro 210	Ala	Ala	Val	Pro	Arg 215	Pro	Pro	Ser	Asn	Pro 220	Pro	Ala	Arg	Gly
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Thr	Tyr	Ser	Met	Asp 245	Thr	Ala	Met	Glu	Val 250	Val	Lys	Phe	Val	Asn 255	Phe
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Ile	Arg	Gly 275	Ile	Asp	Ile	Ile	Lys 280	Trp	Met	Glu	Arg	Tyr 285	Leu	Arg	Asp
Lys	Thr 290	Val	Met	Ile	Ile	Val 295	Ala	Ile	Ser	Pro	Lys 300	Tyr	Lys	Gln	Asp
Val 305	Glu	Gly	Ala	Glu	Ser 310	Gln	Leu	Asp	Glu	Asp 315	Glu	His	Gly	Leu	His 320
Thr	Lys	Tyr	Ile	His 325	Arg	Met	Met	Gln	Ile 330	Glu	Phe	Ile	Lys	Gln 335	Gly
Ser	Met	Asn	Phe 340	Arg	Phe	Ile	Pro	Val 345	Leu	Phe	Pro	Asn	Ala 350	Lys	Lys
Glu	His	Val 355	Pro	Thr	Trp	Leu	Gln 360	Asn	Thr	His	Val	Tyr 365	Ser	Trp	Pro
Lys	Asn 370	Lys	Lys	Asn	Ile	Leu 375	Leu	Arg	Leu	Leu	Arg 380	Glu	Glu	Glu	Tyr
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Gly	Leu	Pro 35	Arg	Ser	Thr	Ser	Ser 40	Ile	Arg	Trp	Leu	Val 45	Met	Trp	Leu

Val	Leu 50	Val	Pro	Trp	Lys	Pro 55	Arg	Lys	Gly	Ala	Val 60	Ser	Leu	Cys	Gly ·
Pro 65	Leu	Phe	Leu	Val	Pro 70	Gly	Ala	Gly	Ile	Ile 75	Gln	Asp	Asn	Leu	Leu 80
His	Arg	Val	Gln	Ala 85	Ser	His	Thr	Gly	Ser 90	Arg	Gln	Gly	Leu	Pro 95	Arg
Gln	Ser	Arg	Leu 100	Asp	His	Leu	Leu	Val 105	Gly	Cys	Ser	Arg	Val 110	Val	Met
Ala	Ile	Trp 115	His	Leu	Val	Ile	Gly 120	Thr	Ser	Arg	Thr	Met 125	Val	Met	Ile
Val	Pro 130	Trp	Ser	Met	Trp	Gly 135	Lys	Ile	Gly	Arg	Gln 140	His	Leu	Cys	Thr
Cys 145	Trp	Ile	Pro	Leu	Arg 150	Phe	Lys	Leu	Arg	Glu 155	Leu	Pro	Gly	Pro	Glu 160
Arg	Ser	Gly	Glu	Val 165	Leu	Gly	Val	Thr	His 170	Gly	Gly	Glu	Gly	Gln 175	Gly
Pro	Phe	Gln	Leu 180	Pro	Asp	Ala	Gln	Asp 185	Ile	Leu	Gly	Leu	Gly 190	Ile	Ile
Ser	Arg	Val 195	Tyr	Gly	Trp	Gln	Ile 200	Gln	Ala	Cys	Ser	Val 205	Pro	Val	Gln
Ala	Gly 210	Ala	Val	Ala	Pro	Ser 215	Pro	Cys	Tyr	Arg	Pro 220	Arg	Ser	Leu	Leu
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Cys	Gly	Gly	Leu 20	Arg	Gly	Arg	Ala	Leu 25	His	Asn	Arg	Phe	Pro 30	Gly	Gly
Gln	Arg	Ala 35	Ser	Arg	Gly	Gly	Thr 40	Glu	Lys	Asn	Gln	Pro 45	Gly	Val	Leu
Pro	Thr 50	Ser	Leu	Ser	Gln	Asn 55	Ala	Val	Arg	Thr	Arg 60	Pro	Gln	Thr	Trp
Pro 65	Gly	Leu	Ser	Asp	Leu 70	Gly	Met	Asn	Gly	Val 75	Thr	Arg	Glu	Pro	Pro 80
Glu	Gly	Trp	Ala	Glu 85	Ala	Pro	Val	Glu	Glu 90	Pro	His	Thr	Leu	Pro 95	Leu
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Arg Arg Thr

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Ser	Leu 50	Ser	Arg	Lys	Leu	Phe 55	Leu	Val	Leu	Phe	Asn 60	Ser	Met	Ser	Pro
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Gln	Arg	Ser	Pro	Asn 85	Thr	Thr	Glu	Asn	Ile 90	Ser	Ile	Ile	Gln	Pro 95	Ser
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Leu	ГÀЗ	Ala	Lys 20	Thr	Phe	Thr	Thr	Lys 25	Gly	1115	110		30		-
Ile	Ser	Leu 35	Ser	Phe	Ser	Leu	His 40	Ile	Met	Phe	Lys	Phe 45	Gln	Arg	His
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Ala	Pro	His	_	Ala	Ala	Ala	Val	_	g Pro	o Thr	Pro	Gly 45) His	His
His	5 Cys		a Ala	Leu	Ser	Gly 55		a Glu	ı Ası	n Tyr	Arg		· Arg	g His	s Ala
Met 65	_	s Lei	ı Ala	a Ser	· Ala		ı Arç	g Arg	g Gl	y Pro 75	Ala	Leu	ı His	s Pro	b Leu 80
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Ala	Pro	Arg 35	Ser	Cys	Cys	Cys	Gln 40	Thr	Asn	Pro	Gly	Pro 45	Pro	Ser	Ser
Leu	Arg 50	Arg	Ala	Phe	Arg	Arg 55	Arg	Glu	Leu	Pro	Phe 60	Pro	Ala	Cys	His
Glu 65	Ile	Gly	Leu	Gly	Ala 70	Glu	Ala	Gly	Ser	Gly 75	Pro	Pro	Pro	Ala	Pro 80
Ala	Ala	Arg	Glu	Ser 85	Arg	Ser	Arg	Ala	Met 90	Glu	Glu	Glu	Ala	Ser 95	Ser
Pro	Gly	Leu	Gly 100	Cys	Ser	Lys	Pro	His 105	Leu	Glu	Lys	Leu	Thr 110	Leu	Gly
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Pro 225	His	Phe	Asp	Ser	Arg 230	Ser	Val	Ile	Phe	Glu 235	Leu	Asp	Ser	Cys	Asn 240
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Ser	Leu	Ser 35	Pro	Leu	Pro	Lys	Lys 40	Lys	Lys	Lys	Glu	Thr 45	Phe	Ile	Met

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Lys 65	Lys	Pro	Pro	Phe	Val 70	Pro	Asn	Ser	Thr	Leu 75	Pro	Ile	Phe	Tyr	Ala 80
Thr	Gln	Thr	Leu	Ser 85	Phe	Trp	Val	Pro	Phe 90	Leu	Gln	Met	Asp	Leu 95	Leu
Arg	Arg	Ile	Ile 100	Val	Phe	His	Val	Phe 105	Ser	Pro	Gln	Val	Thr 110	Lys	Ile
Asn	Ile	Cys 115	Ile	Tyr	Asn	Leu	Tyr 120	Tyr	Cys	Tyr	Ile	Phe 125	Val	Asp	Asn
Thr	Phe 130	Arg	Trp	Cys	Trp	Val 135	Ile	Tyr	Tyr	Asn	Leu 140	Asn	Leu	Gly	Ile
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Ser	Ser	Phe	Pro 20	Leu	Pro	Ala	Ala	Lys 25	Lys	Lys	Lys	Lys	Gly 30	Asn	Val
Tyr	His	Glu 35	Ser	Thr	Gly	Phe	Gln 40	Ser	Leu	Ser	Lys	Arg 45	Asp	Val	Glu
Arg	Ala 50	Lys	Glu	Thr	Thr	Leu 55	Cys	Ser	Gln	Leu	His 60	Phe	Thr	His	Ile
Leu 65	Cys	Asn	Thr	Asn	Thr 70	Val	·Leu	Leu	Gly	Pro 75	Phe	Leu	Thr	Asp	Gly 80
Pro	Leu	Glu	Lys	Asn 85	Tyr	Arg	Ile	Pro	Arg 90	Phe					
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Leu	Asn	Leu	Lys 20	Glu	Tyr	Ile	His	Tyr 25	Gln	Glu	Leu	Ser	Thr 30	Lys	Ala
Gly	Val	Lys 35	Leu	His	Tyr	Thr	Trp 40	Leu	Phe	Thr	Ile	Pro 45	Gly	Ser	Pro

Pro	Gln 50	His	Asp	Cys	Gly	Arg 55	Pro	Lys	Asp	Ile	Pro 60	Arg	Phe	Arg	Leu
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Ser	Ser	Met	Pro 20	Cys	Pro	Pro	Ser	Gly 25	Pro	Val	Pro	Val	Lys 30	Ala	Gly
Ser	His	Phe 35	Ser	His	Pro	Gln	Ala 40	Val	Pro	Lys	Ala	Leu 45	Glu	Glu	Pro
Lys	Glu 50	Arg	Gln	Glu	Pro	Ser 55	Trp	Glu	Leu	Thr	Leu 60	Met	Thr	Arg	Gly
Gln 65	Leu	Ala	Gln	Phe	Pro 70	Leu	Phe	Ser	Trp	Gly 75	Glu	Gly	Thr	Leu	
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Glu	Arg	Arg	Gly 20	Lys	Arg	Ser	Val	Pro 25	Lys	Val	Asn	Pro	Arg 30	Ser	Leu
Gly	Pro	Thr 35	Ser	Leu	Pro	Thr	Ala 40	Thr	Ser	His	Gln	Pro 45	His	Ala	Arg
Ala	Arg 50	Pro	Phe	Pro	Leu	Gln 55	·Leu	Thr	Ala	Gln	Gln 60	Met	Leu	Gly	Gln
Asn 65	·Ala	Ser	Pro	His	Leu 70	Thr	Lys	Gly	Leu	Gln 75	Pro	Ala	Gly	Trp	Glu 80
Met	Asn	Gln	Ile	Leu 85	Thr	Pro	Pro	Pro	Pro 90	Cys	Pro	Ala	His	Leu 95	Leu
Gly	Gln	Tyr	Gln 100												
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Pro	Gly	His	Gln 20	Gly	Gln	Leu	Pro	Thr 25	Trp	Leu	Leu	Pro	Phe 30	Leu	Gly .
Phe	Phe	Gln 35		Phe	Gly	Asn	Ser 40	Leu	Gly	Val	Gly	Glu 45	Val	Ala	Ser
Cys	Leu 50	His	Trp	Tyr	Trp	Pro 55	Arg	Arg	Trp	Ala	Gly 60	His	Gly	Gly	Gly
Gly 65	Val	Asn	Ile	Trp	Phe 70	Ile	Ser	His	Pro	Ala 75	Gly	Cys	Lys	Pro	Leu 80
Val	Lys										•				
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Leu	Val	Ile	Lys 20	Val	Asn	Ser	Gln	Leu 25	Gly	Ser	Cys	Leu	Ser 30	Leu	Gly
Ser	Ser	Arg 35	Ala	Leu	Gly	Thr	Ala 40	Trp	Gly	Trp	Glu	Lys 45	Trp	Leu	Pro
Ala	Phe 50	Thr	Gly	Thr	Gly	Pro 55	Glu	Gly	Gly	Gln	Gly 60	Met	Glu	Glu	Gly
Val 65	Leu	Ile	Ser	Gly	Ser 70	Phe	Pro	Thr	Leu	Leu 75	Ala	Val	Asn	Leu	
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Ser	Leu	His	Ser 20	His	Trp	Gly	Thr	Thr 25		Cys	Met	Gly	Arg 30	Asn	Ser
Lys	Cys	Pro 35	His	Cys	Gly	His	Trp 40		Gly	Ser	Ala	Phe 45	_	Gln	Gly
Val	. Cys 50	_	Asn	Trp	Leu	Ile 55		Val	Cys	Gln	Ser 60		Gln	His	Thr
Lys 65		Ser	Ala	Ile	Lys 70		. Val	Ala	Ser	Leu 75		Pro	Pro	Ser	Cys 80
Туг	: Ser	Gly	Prcسم	Ser 85		Leu	ı Met	•							

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Ala	Ser	Arg	Ser 20	Ser	Ile	Ser	Gly	Val 25	Lys	Arg	Gly	Thr	Val 30	Ala	Leu
Pro	Ser	Trp 35	Leu	Arg	Met	Arg	Lys 40	Ser	Phe	Leu	Gln	Trp 45	Glu	Glu	Ile
His	Phe 50	Ser	Ile	Pro	Val	Gln 55	Ser	Asp	Phe	Met	Gly 60	Pro	Val	Leu	Asn
Ser 65	Asp	Cys	Ile	Ile	Asn 70	Thr	Ile	Lys	Arg	Asp 75	Ser	Glu	Met	Gly	Ser 80
Arg	Ile	His	Trp	Asp 85	Asn	Ser	Lys	Ala	Tyr 90	Asn	Thr	Ala	Leu	Met 95	Asp
Pro	Thr														
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Thr	Gly	Pro	Arg 20	Val	Thr	Gly	Trp	Arg 25	Met	Gln	Gly	Ser	His 30	Ile	Leu
Tyr	Gly	Arg 35	Asp	Phe	Gly	Val	Leu 40	Ile	Thr	Leu	Ala	Tyr 45	Arg	Asn	Lys
Pro	Ile 50	Pro	Ala	Asp	Ser	Leu 55	·Thr	Lys	Gly	Thr	Pro 60	His	Pro	Met	Thr
Thr 65	Met	Arg	Ala	Leu	Ala 70	Val	Ser	Ala	His	Ala 75	His	Ser	Cys	Thr	Pro 80
Met	Ala	Val													
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Met	Phe	Pro	Tyr 20	Phe	Ser	Cys	Lys	Glu 25	Asn	Asn	Ile	Leu	Thr 30	Tyr	Thr

Ser Cys Arg Lys Tyr His Leu Phe Pro Leu Tyr Tyr Ser Thr Met Phe

		35					40					45			
Thr	Leu 50	Leu	Tyr	Cys	Gln	Ala 55	Glu	Ser	Ile	Lys	Asn 60	Val	His	Ile	His
Phe 65	Glu	Leu	Cys	Ile	Leu 70	Phe	Leu	Lys	Lys	Gly 75	Ala	Gly	Leu	Trp	His 80
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Val	Glu	Ser	Glu 20	Gln	Cys	Trp	Gln	Thr 25	Leu	Pro	Arg	Lys	Ser 30	Cys	Phe
Ser	Arg	Cys 35	Pro	Cys	Phe	Gly	Ile 40	Ser	Phe	Leu	Gly	Arg 45	Lys	Lys	Lys
Ser	Ser 50	Leu	Thr	Ile	Val.	Asn 55	Ser	Ile	Ser	Tyr	Phe 60	Ser	Phe	Cys	Cys
Ser 65	Asn	Gly	Phe	Pro	Pro 70	Thr	Ile	Ile	Pro	Ser 75	Ile	Tyr	Val	Leu	Leu 80
Tyr	Ser	Pro	Leu	Ser 85	Pro	Val	Thr	Phe	Leu 90	Ser	Asn	Thr	Pro	Phe 95	Pro
Lys	Phe														
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Gly	Glu	His	Lys 20	Cys	Thr	Glu	Arg	Asp 25	Val	Leu	Arg	Val	Thr 30	Thr	Lys
Glu	Leu	Pro 35	Ser	Leu	Ser	Leu	Thr 40	Gln	Ala	Met	Cys	Thr 45	Cys	Asp	Ala
Ala	Glu 50	Cys	Ala	Gly	Val	Gly 55	Gly	Gly	His	Val	Ala 60	Pro	Pro	Glu	His
Phe 65	Leu	Thr	Gly	Lys	Leu 70	Gly	Asp	Pro	Leu	Leu 75	Val	Asn	Phe	Val	Glu 80
Ile	Arg	Thr	Val	Ser 85	Phe	Thr									

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Gln	Arg	Glu	Ser 20	Leu	Gly	Pro	Glu	Leu 25	Lys	Glu	Phe	Ile	Glu 30	Pro	Trp
Gln	Thr	Gly 35	Ser	Lys	Gln	Pro	Ile 40	Leu	Ala	Äla	Val	Leu 45	Arg	Arg	Glu
Cys	Gly 50	Gly	Gln	Ile											
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Val	Gln	Ala	Ala 20	Ile	Ala	Ser	Phe	Leu 25	Ser	Asp	Cys	Asn	Ser 30	Pro	Ile
Arg	Phe	Pro 35	Cys	Phe	Tyr	Ile	Cys 40	Pro	Pro	His	Ser	Leu 45	Leu	Asn	Thr
Ala	Ala 50	Arg	Met	Gly	Cys	Leu 55	Leu	Pro	Val	Cys	His 60	Gly	Ser	Ile	Asn
Ser 65	Leu	Ser	Ser	Gly	Pro 70	Lys	Asp	Ser	Arg	Trp 75	Ala	Cys	Ser	Thr	Arg 80
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His	Thr	Val	Cys 20	Gln	Met	Phe	His	Ala 25	Glu	Pro	Val	Ser	Arg 30	Ile	Leu
Leu	Ser	Asp 35	Tyr	Gly	Gly	Phe	Thr 40	Thr	Arg	Pro	Gly	Ser 45	Asn	Ser	Leu
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Val Phe Arg Leu Glu Met Pro Pro Thr Leu Val Ile Asn Ile Thr Lys 35 40 45 Val Tyr Asn Phe Leu Gly Arg His Phe Ile Lys Cys Ile Met Pro Trp 50 55 60 Leu Leu Leu Arg 65 <210> 508 <211> 65 <212> PRT <213> homo sapiens <400> 508 Leu Lys Phe Leu Gln Val Leu Lys Phe Phe Phe Tyr Ser Leu His Trp 10 Ile Tyr Val Phe Leu Ile Pro Asn Met Phe Asn Trp Asp Val Cys His 20 25 30 Ser Arg Ala Ala Arg Gln Thr Phe Lys Ser Asn Ser His Thr Ala Glu 35 40 Ala Phe Leu Leu Leu Thr Gln Lys Phe Arg Lys Thr Val Thr Val Leu 50 55 60 Thr 65 <210> 509 <211> 78 <212> PRT <213> homo sapiens <400> 509 Gly Pro Arg Ala His Trp Pro Leu Pro Asn Thr Met Leu Glu Pro Lys 10 Arg Ala Met Asn Gly Pro Glu ∙Tyr Asn Gly Asp Ile Phe Met Phe Gln 20 25 30 Pro Phe Asn Leu Thr Cys Leu Leu Leu Ser Phe Pro Pro Ile Ser Ser 40 45 Asn Leu Phe Cys Thr Ile Leu Tyr Tyr Leu Gly Thr Leu Ile Ser Ser 50 55 60 Tyr Arg Ile Pro Ser Ser Leu Met Ser Cys Pro Lys Gln Tyr 65 70 75 <210> 510 <211> 63 <212> PRT <213> homo sapiens <400> 510 Ser Leu Lys Leu Gly Phe Leu Asp Val Glu Asn Thr Pro Cys Ala 10 15

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Gly	His	Phe 35	Leu	Phe	Thr	Ser	Glu 40	Tyr	Leu	Tyr	Phe	Leu 45	Phe	Leu	Tyr
Val	Leu 50	Lys	Lys	Ala	Phe	Leu 55	Tyr	Ile	Met	Asn	Tyr 60	Phe	Phe	Phe	
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Glu	Lys	Ile	Ala 20	Arg	Tyr	Leu	Leu	Arg 25	Ser	Ala	Cys	Arg	Ser 30	Ala	Val
Gly	Leu	Val 35	Thr	Ile	Gly	Ser	Lys 40	Val	Leu	Leu	Gln	Trp 45	Gln	Ile	Leu
Trp	Pro 50	Leu	Ser	Gly											
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Ala	Asp	Leu	Val 20	Ala	Phe	Glu	Trp	Leu 25	Lys	Thr	Thr	Thr	Leu 30	His	Arg
Ala	Gly	Ala 35	Met	His	Arg	His	·Pro 40	Ser	Leu	Pro					
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Phe		_	T 011	Ara	Asn	Phe	Leu	Val	Leu	Ser	Trp	Val	Thr	Ile	Leu
	Ser	Leu	20					25					30		
	Ser Asn	Phe		Thr				25					30		

<213> homo sapiens

<400> 514

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Ala	Arg	Ser	Ser 20	Asp	Pro	Leu	Arg	Ser 25	Ala	Pro	Leu	Gly	Pro 30	Ala	Pro
Pro	Val	Asn 35	Met	Ile	Arg	Cys	Gly 40	Leu	Ala	Cys	Glu	Arg 45	Cys	Arg	Trp
Ile	Leu 50	Pro	Leu	Leu	Leu	Leu 55	Ser	Ala	Ile	Ala	Phe 60	Asp	Ile	Ile	Ala
Leu 65	Ala	Gly	Arg	Gly	Trp 70	Leu	Gln	Ser	Ser	Asp 75	His	Gly	Gln	Thr	Ser 80
Ser	Leu	Trp	Trp	Lys 85	Cys	Ser	Gln	Glu	Gly 90	Gly	Gly	Ser	Gly	Ser 95	Tyr
Glu	Glu	Gly	Cys 100	Gln	Ser	Leu	Met	Glu 105	Tyr	Ala	Trp	Gly	Arg 110	Ala	Ala
Ala	Ala	Met 115	Leu	Phe	Cys	Gly	Phe 120	Ile	Ile	Leu	Val	Ile 125	Cys	Phe	Ile
Leu	Ser 130	Phe	Phe	Ala	Leu	Cys 135	Gly	Pro	Gln	Met	Leu 140	Val	Phe	Leu	Arg
Val 145	Ile	Gly	Gly	Leu	Leu 150	Ala	Leu	Ala	Ala	Val 155	Phe	Gln	Ile	Ile	Ser 160
Leu	Val	Ile	Tyr	Pro 165	Val	Lys	Tyr	Thr	Gln 170	Thr	Phe	Thr	Leu	His 175	Ala
Asn	Arg	Ala	Val 180	Thr	Tyr	Ile	Tyr	Asn 185	Trp	Ala	Tyr	Gly	Phe 190	Gly	Trp
Ala	Ala	Thr 195	Ile	Ile	Leu	Ile	Gly -200	Cys	Ala	Phe	Phe	Phe 205	Cys	Cys	Leu
Pro	Asn 210	Tyr	Glu	Asp	Asp	Leu 215	Leu	Gly	Asn	Ala	Lys 220	Pro	Arg	Tyr	Phe
Tyr 225	Thr	Ser	Ala												
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<212> PRT

<213> homo sapiens

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		35					40					45			
Arg	Gln 50	Arg	Ser	Gln	Ala	Arg 55	Pro	Gln	Arg	Ile	Met 60	Leu	Thr	Gly	Gly
Ala 65	Gly	Pro	Ser	Gly	Ala 70	Glu	Arg	Ser	Gly	Ser 75	Glu	Glu	Arg	Ala	Gly 80
Arg	Ala	Thr	Ala	Glu 85	Ser	Gly	Leu	Arg	Ala 90	Arg	Ala	Pro	Pro		
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Phe	Trp	Ser	Pro 20	Ser	Gln	Gln	Gln	Arg 25	Phe	Ser	Pro	Thr	Phe 30	Ile	Pro
Lys	Leu	Gly 35	Arg	Cys	Val	Glu	Val 40	Pro	Gly	Leu	Gly	Ile 45	Ala	Gln	Lys
Val	Ile 50	Phe	Val	Val	Gly	Glu 55	Ala	Ala	Glu	Glu	Glu 60	Gly	Thr	Ala	Asp
Gln 65	Asp	Asn	Arg	Gly	Cys 70	Pro	Pro	Lys	Ala	Val 75	Gly	Pro	Val	Ile	Asp 80
Val	Ser	Asp	Ser	Thr 85	Val	Gly	Met	Lys	Gly 90	Glu	Gly	Leu	Gly	Val 95	Leu
His	Gly	Val	Asn 100	Tyr	Gln	Gly	Asp	Asp 105	Leu	Glu	His	Ser	Ser 110	Gln	Gly
Lys	Glu	Thr 115	Ser	Asn	His	Ser	Gln 120	Glu	Asp	Lys	His	Leu 125	Gly	Ser	Thr
Glu	Gly 130	Glu	Glu	Gly	Glu	Asp 135	Glu	Thr	Asp	His	Gln 140	Asp	Asp	Glu	Ala
Thr 145	Glu	Glu	His	Gly	Ser 150	Arg	Cys	Ser	Thr	Pro 155	Arg	Val	Leu	His	Glu 160
Ala	Leu	Thr	Ala	Leu 165	Leu	Val	Gly	Pro	Ala 170	Ala	Ala	Ala	Leu	Leu 175	Gly
Ala	Phe	Pro	Pro 180	Gln	Arg	Gly	Arg	Leu 185	Ala	Val	Val	Ala	Arg 190	Leu	Gln
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Leu	Pro	Arg	Ser 20	Leu	Glu	Leu	His	Pro 25	Gln	Lys	Met	Asp	Pro 30	Lys	Arg
Gln	His	Ile 35	Gln	Leu	Leu	Ser	Ser 40	Leu	Thr	Glu	Cys	Leu 45	Thr	Val	Asp
Pro	Leu 50	Ser	Ala	Ser	Val	Trp 55	Arg	Gln	Leu	Tyr	Pro 60	Lys	His	Leu	Ser
Gln 65	Ser	Ser	Leu	Leu	Leu 70	Glu	His	Leu	Leu	Ser 75	Ser	Trp	Glu	Gln	Ile 80
Pro	Lys	Lys	Val	Gln 85	Lys	Ser	Leu	Gln	Glu 90	Thr	Ile	Gln	Ser	Leu 95	Lys
Leu	Thr	Asn	Gln 100	Glu	Leu	Leu	Arg	Lys 105	Gly	Ser	Ser	Asn	Asn 110	Gln	Asp
Val	Val	Thr 115	Cys	Asp	Met	Ala	Cys 120	Lys	Gly	Leu	Leu	Gln 125	Gln	Val	Gln
Gly	Pro 130	Arg	Leu	Pro	Trp	Thr 135	Arg	Leu	Leu	Leu	Leu 140	Leu	Leu	Val	Phe
Ala 145	Val	Gly	Phe	Leu	Cys 150	His	Asp	Leu	Arg	Ser 155	His	Ser	Ser	Phe	Gln 160
Ala	Ser	Leu	Thr	Gly 165	Arg	Leu	Leu	Arg	Ser 170	Ser	Gly	Phe	Leu	Pro 175	Ala
Ser	Gln	Gln	Ala 180	Cys	Ser	Lys	Phe	Thr 185	Pro	Thr	Val	Cys	Lys 190	Val	Thr
Gly	Trp	Leu 195	Gly	Glu	Lys	Cys	Arg 200	Phe	Gly	Val	Pro				

<210> 518

<211> 90

<212> PRT

<213> homo sapiens

<400> 518

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Glu	Gļu	Pro	Arg 20	Pro	Gly	Gln	Pro	Arg 25	Thr	Leu	Asn	Leu	Leu 30	Gln	Gln
Ala	Leu	Ala 35	Gly	His	Val	Thr	Gly 40	Asp	Asp	Ile	Leu	Val 45	Val	Thr	Ala
Thr	Leu 50	Pro	Gln	Gln	Leu	Leu 55	Val	Gly	Lys	Leu	Glu 60	Gly	Leu	Asn	Gly
Phe 65	Leu	Gln	Arg	Leu	Leu 70	Tyr	Leu	Leu	Gly	Asn 75	Leu	Leu	Pro	Gly	Ala 80
Glu	Gln	Val	Leu	Gln	Gln	Lys	Ala	Gly	Leu						

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Thr	Val	Gly	Val 20	Asn	Leu	Glu	His	Ala 25	Cys	Trp	Leu	Ala	Gly 30	Lys	Lys
Pro	Asp	Asp 35	Arg	Ser	Asn	Arg	Pro 40	Val	Arg	Glu	Ala	Trp 45	Lys	Glu	Leu
Cys	Asp 50	Arg	Arg	Ser	Trp	His 55	Arg	Lys	Pro	Thr	Ala 60	Lys	Thr	Ser	Ser
Asn 65	Arg	Arg	Ser	Arg	Val 70	Gln	Gly	Ser	Arg	Gly 75	Pro				-
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Ser	Ala	Asn	Glu 20	Lys	Pro	Ala	Leu	Ile 25	Pro	Arg	Glu	Lys	Lys 30	Ile	Ser
Ile	Leu	Glu 35	Glu	Pro	Ser	Lys	Ala 40	Leu	Arg	Gly	Val	Thr 45	Gly	Pro	Asn
Ile	Glu 50	Lys	Ser	Val	Lys	Asp 55	Leu	Gln	Arg	Cys	Thr 60	Val	Ser	Leu	Thr
Arg 65	Tyr	Arg	Val	Met	Ile 70	Lys	Glu	Glu	Val	Asp 75	Ser	Ser	Val	Lys	Lys 80
Ile	Lys	Ala	Ala	Phe 85	Ala	Glu	Leu	His	Asn 90	Cys	Ile	Ile	Asp	Lys 95	Glu
Val	Ser	Leu	Met 100	Ala	Glu	Met	Asp	Lys 105	Val	Lys	Glu	Glu	Ala 110	Met	Glu
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Ile	Ser	Tyr	Phe 20	Ile	Val	Asn	Glu	Ala 25	Lys	Leu	Ile	Phe	His 30	Thr	Phe
His	Cys	Gly 35	Pro	Ala	Gln	Gly	Cys 40	Asp	Val	Val	Ser	His 45	Ser	Leu	Cys
Ile	Leu 50	Ala	Gln	Asp	Thr	Gln 55	Leu	Glu	Leu	Asp	Ala 60	Leu	Pro	Phe	Leu
Gln 65	Ala	Ile	Pro	Phe	Val 70	Gly	His	Pro	Asn	Asp 75	Ala	Lys	Trp	Ile	Asp 80
Leu	Thr	Phe	His	Ile 85	Ala	Leu	`Leu	His	Asn 90	Leu	Asn	His	Ser	Leu 95	Val
Leu	Ser	Leu	Cys 100	Trp	Ile	Asn	Thr	Pro 105	Gln	Gly	Ala	Asn	Tyr 110	Phe	Ala
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Asn	Thr	Lys	Phe 20	Asn	Leu	Ile	Ser	Tyr 25	Leu	Arg	Arg	Ser	Arg 30	Ser	Phe

His	Ile	Leu 35	Gly	Leu	Lys	Ser	Asn 40	Ser	Gln	Phe	His	Pro 45	Thr	Val	Ile .
Ile	Ser 50	Asn	Asn	Ala	Ile	Leu 55	Ser	Leu	Leu	Leu	Phe 60	Ala	Phe	Ile	Trp
Ala 65	Ser	Gly	Phe	Arg	Ile 70	Gly	Lys	Ser	Gly	Phe 75	Phe	Phe	Tyr	Arg	Ala 80
Gln	Lys	Thr	Val	Ile 85											
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Arg	Phe	Glu	Glu 20	Lys	Arg	Phe	Lys	Leu 25	Asp	His	Ser	Val	Ser 30	Ser	Thr
Asn	Gly	His 35	Arg	Trp	Gln	Ile	Phe 40	Gln	Asp	Trp	Leu	Gly 45	Thr	Asp	Gln
Asp	Asn 50	Leu	Asp	Leu	Ala	Asn 55	Val	Asn	Leu	Met	Leu 60	Glu	Leu	Leu	Val
Gln 65	Lys	Lys	Lys	Gln	Leu 70	Glu	Ala	Glu	Ser	His 75	Ala	Ala	Gln	Leu	Gln 80
Ile	Leu	Met	Glu	Phe 85	Leu	Lys	Val	Ala	Arg 90	Arg	Asn	Lys	Arg	Glu 95	Gln
Leu	Glu	Gln	Ile 100	Gln	Lys	Glu	Leu	Ser 105	Val	Leu	Glu	Glu	Asp 110	Ile	Lys
Arg	Val	Glu 115	Glu	Met	Ser	Gly	Leu `120	Tyr	Ser	Pro	Val	Ser 125			
Thr	Val 130	Pro	Gln	Phe	Glu	Ala 135	Pro	Ser	Pro	Ser	His 140	Ser	Ser	Ile	Ile
Asp 145		Thr	Glu	Tyr	Ser 150	Gln	Pro	Pro	Gly	Phe 155	Ser	Gly	Ser	Ser	Gln 160
Thr	Lys	Lys	Gln	Pro 165	Trp	Tyr	Asn	Ser	Thr 170		Ala		-	Arg 175	
Arg	Leu	Thr	Ala 180	His	Phe	Glu	Asp	Leu 185	Glu	Gln	Cys	Tyr	Phe 190	Ser	Thr
Arg	Met	Ser 195	_	Ile	Ser	Asp	Asp 200	Ser	Arg	Thr	Ala	Ser 205		Leu	
Glu	Phe 210		Glu	Сув	Leu	Ser 215		Phe	Thr	Arg	220	Asn		Val	
Pro 225		. Ala	Thr	Leu	Ser 230		Ala	Ser	Asp	Leu 235	Tyr	Asn	Gly	Ser	Ser 240

Ile	Val	Ser	Ser	Ile 245	Glu	Phe	Asp	Arg	Asp 250	Cys	Asp	Tyr	Phe	Ala 255	Ile '
Ala	Gly	Val	Thr 260	Lys	Lys	Ile	Lys	Val 265	Tyr	Glu	Tyr	Asp	Thr 270	Val	Ile
Gln	Asp	Ala 275	Val	Asp	Ile	His	Tyr 280	Pro	Glu	Asn	Glu	Met 285	Thr	Cys	Asn
Ser	Lys 290	Ile	Ser	Cys	Ile	Ser 295	Trp	Ser	Ser	Tyr	His 300	Lys	Asn	Leu	Leu
Ala 305	Ser	Ser	Asp	Tyr	Glu 310	Gly	Thr	Val	Ile	Leu 315	Trp	Asp	Gly	Phe	Thr 320
Gly	Gln	Arg	Ser	Lys 325	Val	Tyr	Gln	Glu	His 330	Glu	Lys	Arg	Cys	Trp 335	Ser
Val	Asp	Phe	Asn 340	Leu	Met	Asp	Pro	Lys 345	Leu	Leu	Ala	Ser	Gly 350	Ser	Asp
Asp	Ala	Lys 355	Val	Lys	Leu	Trp	Ser 360	Thr	Asn	Leu	Asp	Asn 365	Ser	Val	Ala
Ser	Ile 370	Glu	Ala	Lys	Ala	Asn 375	Val	Cys	Cys	Val	Lys 380	Phe	Ser	Pro	Ser
Ser 385	Arg	Tyr	His	Leu	Ala 390	Phe	Gly	Cys	Ala	Asp 395	His	Cys	Val	His	Tyr 400
Tyr	Asp	Leu	Arg	Asn 405	Thr	Lys	Gln	Pro	Ile 410	Met	Val	Phe	Lys	Gly 415	His
Arg	Lys	Ala	Val 420	Ser	Tyr	Ala	Lys	Phe 425	Val	Ser	Gly	Glu	Glu 430	Ile	Val
Ser	Ala	Ser 435	Thr	Asp	Ser	Gln	Leu 440	Lys	Leu	Trp	Asn	Val 445	Gly	Lys	Pro
Tyr	Cys 450	Leu	Arg	Ser	Phe	Lys 455	-	His	Ile	Asn	Glu 460	Lys	Asn	Phe	Val
Gly 465	Leu	Ala	Ser	Asn	Gly 470	Asp	Tyr	Ile	Ala	Cys 475	Gly	Ser	Glu	Asn	Asn 480
Ser	Leu	Tyr	Leu	Tyr 485	Tyr	Lys	Gly	Leu	Ser 490	Lys	Thr	Leu	Leu	Thr 495	Phe
Lys	Phe	Asp	Thr 500	Val	Lys	Ser	Val	Leu 505	Asp	Lys	Asp	Arg	Lys 510	Glu	Asp
Asp	Thr	Asn 515	Glu	Phe	Val	Ser	Ala 520	Val	Cys	Trp	Arg	Ala 525	Leu	Pro	Asp
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Arg Asp Ile Thr

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Ser	Pro	Thr 35	Glu	Tyr	His	Glu	Pro 40	Val	Tyr	Ala	Asn	Pro 45	Phe	Tyr	Arg
Pro	Thr 50	Thr	Pro	Gln	Arg	Glu 55	Thr	Val	Thr	Pro	Gly 60	Pro	Asn	Phe	Gln
Glu 65	Arg	Ile	Lys	Ile	Lys 70	Thr	Asn	Gly	Leu	Gly 75	Ile	Gly	Val	Asn	Glu 80
Ser	Ile	His	Asn	Met 85	Gly	Asn	Gly	Leu	Ser 90	Glu	Glu	Arg	Gly	Asn 95	Asn
Phe	Asn	His	Ile 100	Ser	Pro	Ile	Pro	Pro 105	Val	Pro	His	Pro	Arg 110	Ser	Val
Ile	Gln	Gln 115	Ala	Glu	Glu	Lys	Leu 120	His	Thr	Pro	Gln	Lys 125	Arg	Leu	Met
Thr	Pro 130	Trp	Glu	Glu	Ser	Asn 135	Val	Met	Gln	Asp	Lys 140	Asp	Ala	Pro	Ser
Pro 145	Lys	Pro	Arg	Leu	Ser 150	Pro	Arg	Glu	Thr	Ile 155	Phe	Gly	Lys	Ser	Glu 160
His	Gln	Asn	Ser	Ser 165	Pro	Thr	Cys	Gln	Glu 170	Asp	Glu	Glu	Asp	Val 175	Arg
Tyr	Asn	Ile	Val 180	His	Ser	Leu	Pro	Pro 185	Asp	Ile	Asn	Asp	Thr 190	Glu	Pro
Val	Thr	Met 195	Ile	Phe	Met	Gly	Tyr 200	Gln	Gln	Ala	Glu	Asp 205	Ser	Glu ,	Glu
Asp	Lys 210	Lys	Phe	Leu	Thr	Gly 215	. ^{Tyr}	Asp	Gly	Ile	Ile 220	His	Ala	Glu	Leu
Val 225	Val	Ile	Asp	Asp	Glu 230	Glu	Glu	Glu	Asp	Glu 235	Gly	Glu	Ala	Glu	Lys 240
Pro	Ser	Tyr	His	Pro 245	Ile	Ala	Pro	His	Ser 250	Gln	Val	Tyr	Gln	Pro 255	Ala
Lys	Pro	Thr	Pro 260	Leu	Pro	Arg	Lys	Arg 265	Ser	Glu	Ala	Ser	Pro 270	His	Glu
Asn	Thr	Asn 275	His	Lys	Ser	Pro	His 280	Lys	Asn	Ser	Ile	Ser 285	Leu	Lys	Glu
Gln	Glu 290	Glu	Ser	Leu	Gly	Ser 295	Pro	Val	His	His	Ser 300	Pro	Phe	Asp	Ala
Gln 305	Thr	Thr	Gly	Asp	Gly 310	Thr	Glu	Asp	Pro	Ser 315	Leu	Thr	Ala	Leu	Arg 320
Met	Arg	Met	Ala	Lys 325	Leu	Gly	Lys	Lys	Val 330	Ile					

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1	ber	Leu	1111	5	Arg	Mec	GIU	GIU	10	GIU	Leu	vai	гур	15	Arg
Leu	Gln	Ala	Ile 20	Thr	Asp	Lys	Arg	Lys 25	Ile	Gln	Glu	Glu	Ile 30	Ser	Gln
Lys	Arg	Leu 35	Lys	Ile	Glu	Glu	Asp 40	Lys	Leu	Lys	His	Gln 45	His	Leu	Lys
Lys	Lys 50	Ala	Leu	Arg	Glu	Lys 55	Trp	Leu	Leu	Asp	Gly 60	Ile	Ser	Ser	Gly
Lys 65	Glu	Gln	Glu	Glu	Met 70	Lys	Lys	Gln	Asn	Gln 75	Gln	Asp	Gln	His	Gln 80
Ile	Gln	Val	Leu	Glu 85	Gln	Ser	Ile	Leu	Arg 90	Leu	Glu	Lys	Glu	Ile 95	Gln
Asp	Leu	Glu	Lys 100	Ala	Glu	Leu	Gln	Ile 105	Ser	Thr	Lys	Glu	Glu 110	Ala	Ile
Leu	Lys	Lys 115	Leu	Lys	Ser	Ile	Glu 120	Arg	Thr	Thr	Glu	Asp 125	Ile	Ile	Arg
Ser	Val 130	Lys	Val	Glu	Arg	Glu 135	Glu	Arg	Ala	Glu	Glu 140	Ser	Ile	Glu	Asp
Ile 145	Tyr	Ala	Asn	Ile	Pro 150	Asp	Leu	Pro	Lys	Ser 155	Tyr	Ile	Pro	Ser	Arg 160
Leu	Arg	Lys	Glu	Ile 165	Asn	Glu	Glu	Lys	Glu 170	Asp	Asp	Glu	Gln	Asn 175	Arg
Lys	Ala	Leu	Tyr 180	Ala	Met	Glu	·Ile	Lys 185	Val	Glu	Lys	Asp	Leu 190	Lys	Thr
Gly	Glu	Ser 19 5	Thr	Val	Leu	Ser	Ser 200	Asn	Thr	Ser	Gly	His 205	Gln	Met	Thr
Leu	Lys 210	Gly	Thr	Gly	Val	Lys 215	Val								
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Gln	Ile	Met	Thr 20	Thr	Thr	Tyr	Ser	His 25	Gly	Leu	Ile	Trp	Tyr 30	Thr	Val

Met	Ile	Ile 35	Phe	Trp	Thr	Ser	Glu 40	Lys	Ile	Asn	Lys	Ile 45	Ser	Arg	Arg
Glu	Ile 50	Cys	Lys	Cys	Phe	Leu 55	Val	Ser	Ser	Ser	Lys 60	Asp	Val	Tyr	Ile
Gly 65	Gly	Thr	Thr	Leu	Arg 70	Ser	Pro	Phe	Phe	Pro 75	Ala	Leu	Pro	Phe	Ser 80
Ser	Leu	Lys	Leu	Leu 85	Arg	Met	Asp	Pro	Gln 90	Ser	His	Leu	Gln	Leu 95	Ser
Glu	His	Gln	Met 100	Gly	Asn	Gly	Gly	Gln 105	Gly	Cys	Leu	Ser	Phe 110	Leu	Leu
Ala	Leu	Ser 11 5	Glu	Ile	Trp	Asn	Phe 120	Cys	Gly	Gly	Ile	Tyr 125	Asp	Leu	Cys
Phe	His 130	Glu	Asp												
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Phe	Phe	Pro	Leu 20	Ala	Leu	Lys	Lys	Ser 25	Ser	Arg	Val	Ser	Ser 30	Ser	His
Leu	Pro	Arg 35	Ile	Tyr	Gln	Ala	Phe 40	Leu	Met	Ser	Ala	Thr 45	Phe	Asn	Glu
Asp	Val 50	Gln	Ala	Leu	Lys	Glu 55	Leu	Ile	Leu	His	Asn 60	Pro	Val	Thr	Leu
Lys 65	Leu	Gln	Glu	Ser	Gln 70		Pro.	Gly	Pro	Asp 75	Gln	Leu	Gln	Gln	Phe 80
Gln	Val	Val	Cys	Glu 85	Thr	Glu	Glu	Asp	Lys 90	Phe	Leu	Leu	Leu	Tyr 95	Ala
Leu	Leu	Lys	Leu 100	Ser	Leu	Ile	Arg	Gly 105	Lys	Ser	Leu	Leu	Phe 110	Val	Asn
Thr	Leu	Glu 115	Arg	Ser	Tyr	Arg	Leu 120	Arg	Leu	Phe	Leu	Glu 125	Gln	Phe	Ser
Ile	Pro 130	Thr	Cys	Val	Leu	Asn 135	Gly	Glu	Leu	Pro	Leu 140	Arg	Ser	Arg	Cys
His 145	Ile	Ile	Ser	Gln	Phe 150	Asn	Gln	Gly	Phe	Tyr 155	Asp	Cys	Val	Ile	Ala 160
Thr	Asp	Ala	Glu	Val 165	Leu	Gly	Ala	Pro	Arg 170	Gln	Arg	Ala	Met	Arg 175	Pro
Arg	Arg	Arg	Ala 180	Lys	Thr	Gly	Thr	Met 185	Ala	Ser	Arg	Phe	Leu 190	Glu	Arg

Asn His Gly Leu

20

Cys Leu Pro Cys

Gln

25

Leu Leu Gly Arg Asn Lys

30

Thr Val Val Ala Leu Gly His 195 <210> 571 <211> 195 <212> PRT <213> homo sapiens <400> 571 **Gln** Arg Val Arg Ala Ala Leu Leu Ser Ser Ala Met Glu Asp Ser Glu 10 15 Gly Ala Leu Phe Glu His Met Gly Leu Asp Pro Arg Leu Leu Gln Ala 20 25 30 Trp Ser Arg Asp Leu Gly Pro Thr Leu Ile Gln Glu Lys 40 45 Pro Leu Ala Leu Glu Gly Lys Asp Leu Leu Ala Arg Ala Arg 50 55 60 Gly Ser Gly Lys Thr Ala Ala Tyr Ala Ile Pro Met Leu Gln Leu Leu 65 70 75 80 His Arg Lys Leu Ala Thr Gly Pro Gly Val Val Glu Gln Ala Arg Val 85 90 95 Leu Val Val Leu Pro Thr Lys Glu Leu Ala Arg Gln Ala Gln Ser Met 100 105 110 Ile Gln Gln Leu Ala Thr Tyr Cys Ala Arg Asp Val Arg Val Ala Asn 115 120 125 Val Ser Ala Ala Glu Asp Ser Val Ser Gln Arg Ala Val Leu Met Glu 130 135 140 Lys Pro Asp Val Val Val Gly Thr Arg Pro Ser Ile Ser Leu His Leu 145 150 155 160 Ser Lys Gln Asp Leu Leu 'Arg Asp Ser Leu Glu Leu Leu Val Val 165 170 175 Glu Ala Asp Asp Leu Leu Phe Ser Phe Gly Phe Glu Glu Glu 180 185 Ser Leu Leu 195 <210> 572 <211> 76 <212> PRT <213> homo sapiens <400> 572 Ile Gly His Asp Ser Asp Ile Pro Ser Thr Val Gly Ser Gln Leu Leu 10 15

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Glu	Gln 50	Gln	Leu	Gln	His	Arg 55	Asn	Ser	Ile	Ser	Gly 60	Arg	Leu	Pro	Gly
Ala 65	Arg	Ala	Gly	Pro	Ser 70	Gln	Glu	Val	Leu	Pro 75	Phe				
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Gly	Arg	Ser	Val 20	His	Trp	Gly	Glu	Ala 25	Thr	Gly	Ser	Leu	Arg 30	His	Leu
Gln	Trp	Gly 35	Arg	Ala	Gln	Pro	Leu 40	Leu	Phe	Leu	Gly	Gly 45	Lys	Leu	Arg
Phe	Lys 50	Leu	Pro	Gly	Gly	Lys 55	Ser	Met	Gly	Arg	Lys 60	Gln	Ala	Leu	Xxx
Leu 65	Leu	Arg	Val	Ser	Val 70	Ser	Pro	Phe	Phe	Pro 75	Leu	Cys	Leu	Ile	Asn 80
Lys	Phe	His	Phe	Ser 85	His	Pro	Ser	Asn	Ser 90	Leu					
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Glu	Thr	Leu	Ser 20	Lys	Xxx	Arg	Ala	Cys 25	Phe	Leu	Pro	Met	Asp 30	Phe	Pro
Pro	Gly	Ser 35	Leu	Asn	Arg	Ser	Phe 40	Pro	Pro	Arg	Lys	Arg 45	Arg	Gly	Trp
Ala	Leu 50	Pro	His	Trp	Arg	Trp 55	Arg	Lys	Leu	Pro	Val 60	Ala	Ser	Pro	Gln
Cys 65	Thr	Leu	Leu	Pro	Val 70	Cys	Arg	Leu	Glu	Phe 75	Leu	Trp	Gly	Pro	Leu 80
Pro	Thr	Trp	Leu	Ser 85	His	Cys	Pro	Leu							

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Leu	Ser	Thr	Ser 20	Phe	Leu	Arg	Leu	Pro 25	Ala	Thr	Gln	Leu	Leu 30	Ile	His
Ile	Trp	Ser 35	Glu	Pro	Trp	Tyr	Pro 40	Ser	Thr	Ile	His	Ala 45	Arg	Lys	Leu
Asp	Val 50	Tyr	Ser	Leu	Pro	Phe 55	Phe	Pro	Leu	Phe	Gly 60	Asp	Phe	Leu	Leu
Ser 65	Ser	Ala	Glu	Asp	Gly 70	Val	Leu	Val	Cys	Pro 75	Met	Ala	Thr	Lys	Ile 80
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Pro	Gly	Pro	Xxx 20	Xxx	Gln	Glu	Gln	Ala 25	Pro	Asn	His	Arg	His 30	Gly	Leu
Glu	Glu	Xxx 35	Arg	Ile	Ser	Xxx	Lys 40	Ser	Cys	Met	Gly	Xxx 45	Val	Asp	Trp
Asn	Gly 50	Pro	Glu	Gly	Val	Glu 55	Ile	Tyr	Val	Asp	Gly 60	Lys	Glu	Pro	His
Asn 65	Lys	Ser	Gln	Ser	Ser 70	Gln	'Leu	Gly	Phe	Lys 75	Thr	Asn	Gly	His	Xxx 80
Lys	Ser	Ser	Glu	Xxx 85	Val	Xxx	His	Asp	Val 90	Leu	Asp	Asn	Arg	Lys 95	Glu
Ala	Gly	Val	Lys 100	Val	Lys	Glu	Gly	His 105	Glu	His	Gln	Asn	Gln 110	Gln	Asp
Pro	Ala	Ser 115	Glu	Leu	His	Val	Leu 120	Phe	Gly	Gly	Ala	Leu 125	Thr	His	Gly
Gly	Asp 130	Ala	Arg	Lys	His	Ala 135	Leu	Pro	Phe	Arg	Thr 140	Gly	Phe	Ser	Arg
Ser 145	Thr	Gln	Gln	Pro	Pro 150	Pro	Arg	Ala	Arg	Phe 155	Leu	Pro	Leu	Cys	Arg 160
Thr															
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Arg	Gly	Cys	Pro 20	Gln	Gly	Glu	Cys	Ser 25	Trp	Glu	Arg	Ala	Val 30	Leu	Leu
Xxx	Pro	Gly 35	Arg	Pro	Ala	Leu	Ser 40	Xxx	Thr	Leu	Leu	Xxx 45	Lys	Xxx	Ala
Pro	Cys 50	Glu	Val	Asn	Trp	Val 55	Xxx	Val	Arg	Gly	Ser 60	Xxx	Xxx	Cys	Xxx
Gly 65	Ala	Pro	Ala	Xxx	Thr 70	Pro	Xxx	Pro	Xxx	Gln 75	Arg	Xxx	Ala	Ala	Ser 80
Ala	Ххх	Ala	Gly	Leu 85	Glu	Xxx	Ser	Xxx	Ala 90	Xxx	Ala	Gly	Xxx	Ala 95	Gly
Cys	Cys	Cys	Xxx 100	Gly	Leu	Pro	Xxx	Val 105	Trp	Ser	Xxx	Leu	Ala 110	Leu	Pro
Thr	Ala	Ser 115	Leu	Glu	Ala	Ser	Xxx 120	Xxx	Pro	Arg	Pro	Ala 125	Ala	Ser	Pro
Arg	Thr 130	Ser	Cys	Pro	Ser	Thr 135	Leu	Pro	Gln	Ala	Thr 140	Lys	Thr	Pro	Arg
Val 145	Leu	Pro	Asn	Lys	Xxx 150	Xxx	Leu	Gly	Thr	Xxx 155	Ser	Lys	Leu	Ile	Phe 160
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Pro	Leu	Ile 35	Pro	Thr	Glu	Ala	Ser 40	Ile	Arg	Val	Trp	Gly 45	Thr	Ser	Gly
Thr	Ser 50	His	Leu	His	Pro	Arg 55	Ser	Ile	Cys	Met	Ile 60	Gln	Lys	Tyr	Asn
His 65	Asp	Gly	Glu	Ala	Gly 70	Arg	Leu	Glu	Ala	Phe 75	Ser	Gln	Gly	Glu	Ser 80
Val	Leu	Lys	Glu	Pro 85	Lys	Tyr	Gln	Glu	Glu 90	Leu	Glu	Asp	Arg	Leu 95	His
Phe	Tyr	Val	Glu 100	Glu	Cys	Asp	Tyr	Leu 105	Gln	Gly	Phe	Gln	Ile 110	Leu	Cys

Asp	Leu	His 115	Asp	Gly	Phe	Ser	Gly 120	Val	Gly	Ala	Lys	Ala 125	Ala	Glu	Leu .
Leu	Gln 130	Asp	Glu	Tyr	Ser	Gly 135	Arg	Gly	Ile	Ile	Thr 140	Trp	Gly	Leu	Leu
Pro 145	Gly	Pro	Tyr	His	Arg 150	Gly	Glu	Ala	Gln	Arg 155	Asn	Ile	Tyr	Arg	Leu 160
Leu	Asn	Thr	Ala	Phe 165	Gly	Leu	Val	His	Leu 170	Thr	Ala	His	Ser	Ser 175	Leu
Val	Cys	Pro	Leu 180	Ser	Leu	Gly	Gly	Ser 185	Leu	Gly	Leu	Arg	Pro 190	Glu	Pro
Pro	Val	Ser 195	Phe	Pro	Tyr	Leu	His 200	Tyr	Asp	Ala	Thr	Leu 205	Pro	Phe	His
Cys	Ser 210	Ala	Ile	Leu	Ala	Thr 215	Ala	Leu	Asp	Thr	Val 220	Thr	Val	Pro	Tyr
Arg 225	Leu	Cys	Ser	Ser	Pro 230	Val	Ser	Met	Val	His 235	Leu	Ala	Asp	Met	Leu 240
Ser	Phe	Cys	Gly	Lys 245	Lys	Val	Val	Thr	Ala 250	Gly	Ala	Ile	Ile	Pro 255	Phe
Pro	Leu	Ala	Pro 260	Gly	Gln	Ser	Leu	Pro 265	Asp	Ser	Leu	Met	Gln 270	Phe	Gly
Gly	Ala	Thr 275	Pro	Trp	Thr	Pro	Leu 280	Ser	Ala	Cys	Gly	Glu 285	Pro	Ser	Gly
Thr	Arg 290	Cys	Phe	Ala	Gln	Ser 295	Val	Val	Leu	Arg	Gly 300	Tyr	Arg	Gln	Ser
Met 305	Pro	His	Lys	Pro	Gln 310	Asn	Gln	Arg	Asp	Thr 315	Ser	Thr	Leu	Cys	Pro 320
Ser	Cys	Met	Tyr	His 325	Trp	Gly	Arg	Asn	Leu 330	Gly	Ser	Val	Phe	Thr 335	Thr
Ala	Ala	Ala	Trp 340	Ser	His	Glu	Phe	Phe 345	Pro	Ser	Ala	Ala	Asp 350	Ser	Leu
Gln	Gly	Gly 355	Ser	Ser	Leu	Pro	Pro 360	Pro	Leu	Leu	Lys	Leu 365	Gln	Ser	Thr
Gly	Tyr 370	Gly	Ser	Gly	Trp	Phe 375	Pro	Gln	Gly	Ser	Arg 380	Ser	Ser	Val	Ser
Leu 385	Ser	Leu	Pro	Gln	Gln 390	Trp	Arg	Ala	Ser	Gln 395	Cys	Leu	Gly	His	Cys 400
Val	Pro	Leu	Arg	Pro 405	Cys	Thr	Arg	Pro	Trp 410	Lys	Pro	Trp	Pro	Glu 415	Thr
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Ser	Ser	Glu 35	Leu	Ala	Ser	Gln	Ala 40	Val	Trp	Lys	Ser	Cys 45	Met	Ser	Ser
Arg	Lys 50	Arg	Trp	Glu	Thr	Ser 55	Ala	Gly	Val	Leu	Phe 60	Pro	Ser	Cys	Trp
Glu 65	Met	Met	Leu	Lys	Val 70	Cys	Gly	Cys	Ala	Pro 75	Cys	Ser	Trp	His	Met 80
Val	Arg	Ile	Thr	Arg 85	Ser	Ala	Ser	Leu	Val 90	His	Arg	Thr	Thr	Phe 95	Ser
Pro	Val	Glu	Leu 100	Thr	Leu	Leu	Leu	Leu 105	Ala	His	Thr	Val	Ala 110	Ser	Ala
Ala	Phe	Gly 115	Cys	Cys	Ser	Pro	Ser 120	Gly	Pro	Leu	Ala	Cys 125	Val	Pro	Leu
Ser	Leu 130	Ala	Lys	Pro	Pro	Leu 135	Gly	Ala	Leu	Gly	Glu 140	Val	Ser	Glu	Val
Ser 145	Ile	Pro	Asp	Gly	Asp 150	Ser	Trp	Thr	Gly	His 155	Val	Leu	Ser	Leu	Val 160
Phe	Thr	Leu	Ala	Leu 165	Leu	Glu	Gly	Ser	His 170	Leu	Ser				
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Arg	Ala	Arg	Arg 20	Thr	Arg	Ala	Gly	Ser 25	Ala	Ser	Asp	Pro	Glu 30	Arg	Ser
Pro	Gly	Ala 35	Met	Ala	Leu	Ser	Glu 40	Leu	Ala	Leu	Val	Arg 45	Trp	Leu	Gln
Glu	Ser 50	Arg	Arg	Ser	Arg	Lys 55	Leu	Ile	Leu	Phe	Ile 60	Val	Phe	Leu	Ala
Leu 65	Leu	Leu	Asp	Asn	Met 70	Leu	Leu	Thr	Val	Val 75	Val	Pro	Ile	Ile	Pro 80
Ser	Tyr	Leu	Tyr	Ser 85	Ile	Lys	His	Glu	Lys 90	Asn	Ala	Thr	Glu	Ile 95	Gln

Thr	Ala	Arg	Pro 100	Val	His	Thr	Ala	Ser 105	Ile	Ser	Asp	Ser	Phe 110	Gln	Ser
Ile	Phe	Ser 115	Tyr	Tyr	Asp	Asn	Ser 120	Thr	Met	Val	Thr	Gly 125	Asn	Ala	Thr
Arg	Asp 130	Leu	Thr	Leu	His	Gln 135	Thr	Ala	Thr	Gln	His 140	Met	Val	Thr	Asn
Ala 145	Ser	Ala	Val	Pro	Ser 150	Asp	Cys	Pro	Ser	Glu 155	Asp	Lys	Asp	Leu	Leu 160
Asn	Glu	Asn	Val	Gln 165	Val	Gly	Leu	Leu	Phe 170	Ala	Ser	Lys	Ala	Thr 175	Val
Gln	Leu	Ile	Thr 180	Asn	Pro	Phe	Ile	Gly 185	Leu	Leu	Thr	Asn	Arg 190	Ile	Gly
Tyr	Pro	Ile 195	Pro	Ile	Phe	Ala	Gly 200	Phe	Cys	Ile	Met	Phe 205	Val	Ser	Thr
Ile	Met 210	Phe	Ala	Phe	Ser	Ser 215	Ser	Tyr	Ala	Phe	Leu 220	Leu	Ile	Ala	Arg
Ser 225	Leu	Gln	Gly	Ile	Gly 230	Ser	Ser	Cys	Ser	Ser 235	Val	Ala	Gly	Met	Gly 240
Met	Leu	Ala	Ser	Val 245	Tyr	Thr	Asp	Asp	Glu 250	Glu	Arg	Gly	Asn	Val 255	Met
Gly	Ile	Ala	Leu 260	Gly	Gly	Leu	Ala	Met 265	Gly	Val	Leu	Val	Gly 270	Pro	Pro
Phe	Gly	Ser 275	Val	Leu	Tyr	Glu	Phe 280	Val	Gly	Lys	Thr	Ala 285	Pro	Phe	Leu
Val	Leu 290	Ala	Ala	Leu	Val	Leu 295	Leu	Asp	Gly	Ala	Ile 300	Gln	Leu	Phe	Val
Leu 305	Gln	Pro	Ser	Arg	Val 310	Gln	Pro	Glu	Ser	Gln 315	Lys	Gly	Thr	Pro	Leu 320
Thr	Thr	Leu	Leu	Lys 325	Asp	Pro	Tyr	Ile	Leu 330	Ile	Ala	Ala	Gly	Ser 335	Ile
Ser	Phe	Ala	Asn 340	Met	Gly	Ile	Ala	Met 345	Leu	Glu	Pro	Ala	Leu 350	Pro	Ile
Trp	Met	Met 355	Glu	Thr	Met	Cys	Ser 360	Arg	Lys	Trp	Gln	Leu 365	Gly	Val	Ala
Phe	Leu 370	Pro	Ala	Ser	Ile	Ser 375	Tyr	Leu	Ile	Gly	Thr 380	Asn	Ile	Phe	Gly
Ile 385	Leu	Ala	His	Lys	Met 390	Gly	Arg	Trp	Leu	Cys	Ala	Leu	Leu	Gly	Met 400
Ile	Ile	Val	Gly	Val 405	Ser	Ile	Leu	Cys	Ile 410	Pro	Phe	Pro	Lys	Asn 415	Ile
Tyr	Gly	Leu	Ile 420	Ala	Pro	Asn	Phe	Gly 425	Val	Gly	Phe	Ala	Asn 430	Gly	Met

Val	Asp	Ser 435	Ser	Met	Met	Pro	Ile 440	Met	Gly	Tyr	Leu	Val 445	Asp	Leu	Arg .
His	Val 450	Ser	Val	Tyr	Gly	Ser 455	Val	Tyr	Ala	Ile	Ala 460	Asp	Val	Ala	Phe
Cys 465		Gly	Tyr	Ala	Ile 470	Gly	Pro	Ser	Ala	Gly 475	Gly	Ala	Ile	Ala	Lys 480
Ala	Ile	Gly	Phe	Pro 485	Trp	Leu	Met	Thr	Ile 490	Ile	Gly	Ile	Ile	Asp 495	Ile
Leu	Phe	Ala	Pro 500	Leu	Cys	Phe	Phe	Leu 505	Arg	Ser	Pro	Pro	Ala 510	Lys	Glu
Glu	Lys	Met 515	Ala	Ile	Leu	Met	Asp 520	His	Asn	Cys	Pro	Ile 525	Lys	Thr	Lys
Met	Tyr 530	Thr	Gln	Asn	Asn	Ile 535	Gln	Ser	Tyr	Pro	Ile 540	Gly	Glu	Asp	Glu
Glu 545	Ser	Glu	Ser	Asp											
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Gln	His	Phe 35	Met	Tyr	Ser	Ile	Ser 40	Lys	Lys	His	Leu	Trp 45	Thr	His	Ser
Ser	Glu 50	Leu	Trp	Ser	Trp	Phe 55	Cys	Lys	Trp	Asn	Gly 60	Gly	Phe	Val	Asn
Asp 65	Ala	Tyr	His	Gly	Leu 70	Pro	Arg	Arg	Pro	Ala 75	Ala	Arg	Val	Arg	Leu 80
Trp	Glu	Cys	Val	Arg 85	His	Cys	Gly	Cys	Gly 90	Ile	Leu	Tyr	Gly	Val 95	Cys
Tyr	Arg	Ser	Phe 100	Cys	Trp	Trp	Cys	Tyr 105	Cys	Lys	Gly	Asn	Trp 110	Ile	Ser
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Asp	Ser	Glu 35	Gln	His	Val	Val	Gln 40	Gln	Gln	Arg	Gln	Glu 45	His	Asp	Glu
Gln	Asp 50	Glu	Leu	Pro	Arg	Ala 55	Ala	Ala	Leu	Leu	Gln 60	Pro	Ala	Asp	Gln
Arg 65	Gln	Leu	Ala	Gln	Gly 70	His	Gly	Ser	Gly	Ala 75	Pro	Leu	Gly	Val	Ala 80
Cys	Ala	Ala	Cys	Pro 85	Gly	Pro	Pro	Cys	Pro 90	Arg	Gln	Arg	Pro	His 95	Arg
Ser	Gly	Leu	Arg 100	Gln	Ser	Gly	Arg	Glu 105	Phe						
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Pro	Glu	Trp	Asn 20	Glu	Ser	Met	His	Ser 25	Leu	Arg	Ile	Ser	Val 30	Gly	Gly
Leu	Pro	Val 35	Leu	Ala	Ser	Met	Thr 40	Lys	Ala	Ala	Asp	Pro 45	Arg	Phe	Arg
Pro	Arg 50	Trp	Lys	Val	Ile	Leu 55	Thr	Phe	Phe	Val	Gly 60	Ala	Ala	Ile	Leu
Trp 65	Leu	Leu	Cys	Ser	His 70	Arg	Pro	Ala	Pro	Gly 75	Arg	Pro	Pro	Thr	His 80
Asn	Ala	His	Asn	Trp 85	Arg	Leu	Gly	Gln	Ala 90	Pro	Ala	Asn	Trp	Tyr 95	Asn
Asp	Thr	Tyr	Pro 100	Leu	Ser	Pro	Pro	Gln 105	Arg	Thr	Pro	Ala	Gly 110	Ile	Arg
Tyr	Arg	Ile 115	Ala	Val	Ile	Ala	Asp 120	Leu	Asp	Thr	Glu	Pro 125	Thr	Ala	Gln
Asp	Glu 130	Asn	Thr	Trp	Arg	Ser 135	Asp	Leu	Lys	Lys	Gly 140	Tyr	Leu	Thr	Leu
Ser 145	Asp	Ser	Gly	Asp	Lys 150	Val	Ala	Val	Glu	Trp 155	Asp	Lys	Asp	His	Gly 160
Val	Leu	Glu	Ser	His 165	Leu	Ala	Glu	Lys	Gly 170	Arg	Gly	Met	Glu	Leu 175	Ser
Asp	Leu	Ile	Val 180	Phe	Asn	Gly	Lys	Leu 185	Tyr	Ser	Val	Asp	Asp 190	Arg	Thr

Gly	Val	Val 195	Tyr	Gln	Ile	Glu	Gly 200	Ser	Lys	Ala	Val	Pro 205	Trp	Val	Ile .
Leu	Ser 210	Asp	Gly	Asp	Gly	Thr 215	Val	Glu	Lys	Gly	Phe 220	Lys	Ala	Glu	Trp
Leu 225		Val	Lys	Asp	Glu 230	Arg	Leu	Tyr	Val	Gly 235	Gly	Leu	Gly	Lys	Glu 240
Trp	Thr	Thr	Thr	Thr 245	Gly	Asp	Val	Val	Asn 250	Glu	Asn	Pro	Glu	Trp 255	Val
Lys	Val	Val	Gly 260	Tyr	Lys	Gly	Ser	Val 265	Asp	His	Glu	Asn	Trp 270	Val	Ser
Asn	Tyr	Asn 275	Ala	Leu	Arg	Ala	Ala 280	Ala	Gly	Ile	Gln	Pro 285	Pro	Ala	Asn
Leu	Ile 290	His	Glu	Ser	Ala	Cys 295	Trp	Ser	Asp	Thr	Leu 300	Gln	Arg	Trp	Phe
Phe 305		Pro	Arg	Arg	Ala 310	Ser	Gln	Glu	Arg	Tyr 315	Ser	Glu	Lys	Asp	Asp 320
Glu	Arg	Lys	Gly	Ala 325	Asn	Leu	Leu	Leu	Ser 330	Ala	Ser	Pro	Asp	Phe 335	Gly
Asp	Ile	Ala	Val 340	Ser	His	Val	Gly	Ala 345	Val	Val	Pro	Thr	His 350	Gly	Phe
Ser	Ser	Phe 35 5	Lys	Phe	Ile	Pro	Asn 360	Thr	Asp	Asp	Gln	Ile 365	Ile	Val	Ala
Leu	Lys 370	Ser	Glu	Glu	Asp	Ser 375	Gly	Arg	Val	Ala	Ser 380	Tyr	Ile	Met	Ala
Phe 385	Thr	Leu	Asp	Gly	Arg 390	Phe	Leu	Leu	Pro	Glu 395	Thr	Lys	Ile	Gly	Ser 400
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Glu	Leu	Asp	Ala	Phe	Val	Phe	His	Ala	Ser	Asp	Leu	Gly	Leu	Arg	Gln

30 20 25 Pro Val Gln Arg Glu Gly His Gln Glu Ala Gly Gly Asp Val Asp Ser 35 40 45 Phe Glu Gly His Ala Ala Val Gly Leu Leu Asn Asp Leu Val Val 50 55 60 Val Gly Glu Gly Arg Glu Ala Val 75 Ser Asp Glu Leu Gly Asp His Arg 65 70 80

Pro	Asp	Val	Ala	His 85	Ser	Asp	Val	Ala	Glu 90	Val	Arg	Gly	Gly	Ala 95	Gln
Gln	Gln	Val	Gly 100	Ala	Leu	Ala	Leu	Val 105	Val	Leu	Leu	Ala	Val 110	Ala	Leu
Leu	Ala	Gly 115	Ala	Ala	Arg	Gln	Glu 120	Glu	Pro	Ala	Leu	Gln 125	Arg	Val	Thr
Pro	Ala 130	Gly	Arg	Leu	Met	Asp 135	Glu	Val	Ser	Trp	Arg 140	Leu	Asp	Ala	Gly
Ser 145	Ser	Pro	Gln	Gly	Val 150	Val	Val	Gly	His	Pro 155	Val	Leu	Val	Val	His 160
Ala	Ala	Leu	Val	Ala 165	His	His	Leu	His	Pro 170	Leu	Arg	Val	Leu	Val 175	His
His	Ile	Thr	Arg 180	Ser	Gly	Arg	Pro	Leu 185	Leu	Ala	Gln	Ala	Ala 190	His	Val
Gln	Thr	Leu 195	Val	Leu	His	Cys	Gln 200	Pro	Phe	Gly	Leu	Glu 205	Ala	Phe	Leu
His	Gly 210	Ala	Val	Ala	Val	Gly 215	Gln	Asn	His	Pro	Gly 220	His	Gly	Phe	Ala
Ala 225	Phe	Asp	Leu	Val	Asp 230	Asp	Pro	Arg	Pro	Val 235	Ile	His	Gly	Val	Glu 240
Phe	Pro	Ile	Glu	Asn 245	Asn	Gln	Val	Gly							

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Ser	Phe	Ala 35	Gly	Ser	Ser	Leu	Trp 40	Lys	Leu	His	Glu	Arg 45	Trp	Leu	Gly
Leu	Gly 50	Phe	Ala	Gly	Val	Tyr 55	Ser	Arg	Val	Lys	Ala 60	Glu	Trp	Asp	Leu
Arg 65	Pro	Arg	Leu	Gly	Thr 70	Thr	Gln	Ala	Glu	Lys 75	Gly	Arg	Phe	His	His 80
Ser	Gln	Cys	Pro	Pro 85	His	Ser	Asn	Tyr	Leu 90	Thr	Pro	Thr	Pro	Thr 95	Leu
Thr	Pro	Thr	Pro 100	Pro	Arg	Asp	Arg	Gln 105	Gly	Cys	His	Gly	Gly 110	Pro	Glu
Gly	Ala	Gly	Ser	Gly	Cys	Pro	Cys	Ala	Gly	Pro	Ser	Gln	Thr	Ser	Pro

		115					120					125			
Pro	Leu 130	Lys	Leu	Lys	His	Ser 135	Cys	Glu	Glu	Gly	Ser 140	Glu	Glu	Gly	Pro
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Cys	His	Lys 35	Ser	Thr	Tyr	Ser	Pro 40	Leu	Pro	Asp	Asp	Tyr 45	Asn	Cys	Asn
Val	Glu 50	Leu	Ala	Leu	Thr	Ser 55	Asp	Gly	Arg	Thr	Ile 60	Val	Cys	Tyr	His
Pro 65	Ser	Val	Asp	Ile	Pro 70	Tyr	Glu	His	Thr	Lys 75	Pro	Ile	Pro	Arg	Pro 80
Asp	Pro	Val	His	Asn 85	Asn	Glu	Glu	Thr	His 90	Asp	Gln	Val	Leu	Lys 95	Thr
Arg	Leu	Glu	Glu 100	Lys	Val	Glu	His	Leu 105	Glu	Glu	Gly	Pro	Met 110	Ile	Glu
Gln	Leu	Ser 115	Lys	Met	Phe	Phe	Thr 120	Thr	Lys	His	Arg	Trp 125	Tyr	Pro	His
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Ile	Leu	Thr 35	Thr	Ser	Val	Ile	Pro 40	Ser	Met	Arg	Ile	Pro 45	Thr	Val	Leu
Ser	Ser 50	Lys	Glu	His	Phe	Ala 55	Lys	Leu	Phe	Tyr	His 60	Arg	Ser	Phe	Leu
Lys 65	Val	Phe	Asn	Phe	Phe 70	Phe	Gln	Ser	Gly	Phe 75	Gln	His	Leu	Ile	Met 80

Cys	Phe	Phe	Ile	Ile 85	Met	His	Arg	Ile	Trp 90	Pro	Arg	Asp	Arg	Phe 95	Cys
Val	Phe	Ile	Trp 100	Asn	Val	His	Arg	Arg 105	Val	Val	Ala	Tyr	Tyr 110	Cys	Pro
Ala	Ile	Arg 115	Ser	Gln	Ser	Lys	Leu 120	Tyr	Val	Ala	Ile	Ile 125	Val	Ile	Trp
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His	Leu	Phe	Ser 20	Tyr	His	Leu	Ile	Ser 25	Ile	Leu	Lys	His	His 30	Gly	Cys
Ser	Cys	Ser 35	Lys	Met	Gly	Asp	Val 40	Lys	Glu	Asn	Tyr	Leu 45	Glu	Thr	Phe
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Arg	Lys	Leu	D	_											
Pro			Pro 20	Lys	Leu	Gly	Met	Glu 25		His	Cys	Asn	Glu 30	Met	Cys
PIO	Pro	Ser 35		Lys		_	Met Pro 40	25			Cys Lys		30	Met Met	Cys Tyr
Ser	Pro Asp 50		20	Leu		Leu	Pro	25 Gly	Gln Ala		-	Ala	30 Gln		-
	Asp	35	20 Ser Trp	Leu	Phe	Leu Thr 55	Pro 40	25 Gly Lys	Gln Ala	Tyr	Lys	Ala 45	30 Gln	Met	Tyr
Ser Lys	Asp 50 Ala	35 Val	20 Ser Trp	Leu	Phe Asn His	Leu Thr 55 Arg	Pro 40 Lys	25 Gly Lys Lys	Gln Ala Lys	Tyr Lys Gln	Lys 60	Ala 45 Lys	30 Gln Lys Tyr	Met Lys	Tyr Lys Tyr
Ser Lys 65 Glu	Asp 50 Ala	35 Val Phe Leu	20 Ser Trp Leu	Leu Thr Ser	Phe Asn His 70 Asn	Leu Thr 55 Arg	Pro 40 Lys His	25 Gly Lys Lys	Gln Ala Lys Thr	Tyr Lys Gln 75 His	Lys Lys 60	Ala 45 Lys Ile Ile	30 Gln Lys Tyr	Met Lys Cys	Tyr Lys Tyr 80
Ser Lys 65 Glu	Asp 50 Ala Ala	35 Val Phe Leu	20 Ser Trp Leu Phe	Leu Thr Ser Thr 85	Phe Asn His 70 Asn	Leu Thr 55 Arg Gly Arg	Pro 40 Lys His	25 Gly Lys Lys Phe	Gln Ala Lys Thr Leu 90 Ser	Tyr Lys Gln 75 His	Lys Lys 60 Ile Phe	Ala 45 Lys Ile Ile	30 Gln Lys Tyr Ala Gln	Met Lys Cys Ala 95	Tyr Lys Tyr 80 Cys

Leu 145	Tyr	Lys	Arg	Pro	Gly 150	Gly	Thr	Met	Ser	Leu 155	Val	Asp	Thr	Phe	His 160
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Ser	Leu	Arg	Ile 20	Ile	Cys	Leu	Ala	Ile 25	Thr	Gly	Ser	Trp	Lys 30	Cys	Phe
Leu	Gly	Cys 35	Val	Lys	Ile	Asn	Gln 40	Gly	Gly	Met	Lys	His 45	Ile	Phe	Leu
Ala	Thr 50	Lys	Leu	Glu	Phe	Leu 55	Arg	Glu	Gln	Met	Gln 60	Arg	Asp	Leu	Leu
Leu 65	Leu	Ala	Arg	Leu	Gln 70	Gly	Pro	Leu	Trp	Ser 75	His	Thr	Glu	Ala	Val 80
Thr	Gly	His	Lys	Pro 85	Arg	Arg	Ala	Arg	Gly 90	Ser	Cys	Ala	Glu	Ala 95	Pro
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Ser	Leu	Arg	Ile 20	Ile	Cys	Leu	Ala	Ile 25	Thr	Gly	Ser	Trp	Lys 30	Cys	Phe
Leu	Gly	Cys 35	Val	Lys	Ile	Asn	Gln 40	Gly	Gly	Met	Lys	His 45	Ile	Phe	Leu
Ala	Thr 50	Lys	Leu	Glu	Phe	Leu 55	Arg	Glu	Gln	Met	Gln 60	Arg	Asp	Leu	Leu
Leu 65	Leu	Ala	Arg	Leu	Gln 70	Gly	Pro	Leu	Trp	Ser 75	His	Thr	Glu	Ala	Val 80
Thr	Gly	His	Lys	Pro 85	Arg	Arg	Ala	Arg	Gly 90	Ser	Cys	Ala	Glu	Ala 95	Pro
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Glu	Gly	Ala 35	Glu	Gly	Ala	Arg	Gly 40	Gly	Gly	Ser	Ser	Tyr 45	Ser	Glu	Met
Ala	Glu 50	Thr	Val	Ala	Asp	Thr 55	Arg	Arg	Leu	Ile	Thr 60	Lys	Pro	Gln	Asn
Leu 65	Asn	Asp	Ala	Tyr	Gly 70	Pro	Pro	Ser	Asn	Phe 75	Leu	Glu	Ile	Asp	Val 80
Ser	Asn	Pro	Gln	Thr 85	Val	Gly	Val	Gly	Arg 90	Gly	Arg	Phe	Thr	Thr 95	Tyr
Glu	Ile	Arg	Val 100	Lys	Thr	Asn	Leu	Pro 105	Ile	Phe	Lys	Leu	Lys 110	Glu	Ser
Thr	Val	Arg 115	Arg	Arg	Tyr	Ser	Asp 120	Phe	Glu	Trp	Leu	Arg 125	Ser	Glu	Leu
Glu	Arg 130	Glu	Ser	Lys	Val	Val 135	Val	Pro	Pro	Leu	Pro 140	Gly	Lys	Ala	Phe
Leu 145	Arg	Gln	Phe	Leu	Leu 150	Glu	Glu	Met	Met	Glu 155	Tyr	Leu	Met	Thr	Ile 160
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Cys	Arg	Arg	Arg 20	Gly	Leu	Pro	Pro	Pro 25	Pro	Pro	Arg	Ser	Ala 30	Ala	Ala
Ala	Gly	Ala 35	Ala	Ala	Arg	Arg	Gly 40	Asp	Thr	Gly	Leu	Ala 45	Arg	Ser	Gly
Arg	Glu 50	Glu	Asn	Glu	His	Val 55	Glu	Arg	Ala	Phe	Thr 60	Pro	His	Ala	Lys
Leu 65	Leu	Pro	Ala	Pro	Leu 70	Lys	Leu	Pro	Pro	Pro 75	Ser	Pro	Gly	Glu ·	Lys 80
Arg	Leu	Thr	Ser	Trp 85	Asn	Ala	Thr	Pro	Gly 90	Ser	Arg	Glu	Ala	Arg 95	Pro

Arg	Leu	Gly	Arg 100	Gly	Thr	Ala	Asp	Trp 105	Gly	Val	Arg	Arg	Ser 110	Gly	Val ·
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Ser	Gly	Glu 35	Ala	Ala	Pro	Ala	Asp 40	Pro	His	Arg	Leu	Arg 45	Val	Ala	His
Ile	Asp 50	Leu	Glu	Glu	Val	Ala 55	Gly	Gly	Ser	Val	Gly 60	Val	Ile	Gln	Val
Leu 65	Arg	Leu	Gly	Asp	Gln 70	Pro	Pro	Gly	Val	Ser 75	His	Gly	Leu	Arg	His 80
Phe	Ala	Val	Ala	Ala 85	Ala	Ala	Ala	Ala	Gly 90	Ser	Leu	Arg	Pro	Leu 95	Arg
Val	Gln	Pro	Pro 100	Pro	Pro	Ala	Leu	Leu 105	Pro	Ala	Val	Gly	Thr 110	Arg	Gly
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Gly	Ser	Asn 35	Gly	Tyr	Gly	Phe	Tyr 40	Leu	Arg	Ala	Gly	Ser 45	Glu	Gln	Lys
Gly	Gln 50	Ile	Ile	Lys	Asp	Ile 55	Asp	Ser	Gly	Ser	Pro 60	Ala	Glu	Glu	Ala
Gly 65	Leu	Lys	Asn	Asn	Asp 70	Leu	Val	Val	Ala	Val 75	Asn	Gly	Glu	Ser	Val 80
Glu	Thr	Leu	Asp	His 85	Asp	Ser	Val	Val	Glu 90	Met	Ile	Arg	Lys	Gly 95	Gly

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Asp	Gln	Thr	Ser	Leu	Leu	Val	Val	Asp	Lys	Glu	Thr	Asp	Asn	Met	Tyr
			100					105					110		-
Arg	Leu	Ala 115	His	Phe	Ser	Pro	Phe 120	Leu	Tyr	Tyr	Gln	Ser 125	Gln	Glu	Leu
Pro	Asn 130	Gly	Ser	Val	Lys	Glu 135	Ala	Pro	Ala	Pro	Thr 140	Pro	Thr	Ser	Leu
Glu 145		Ser	Ser	Pro	Pro 150	Asp	Thr	Thr	Glu	Glu 155	Val	Asp	His	Lys	Pro 160
Lys	Leu	Cys	Arg	Leu 165	Ala	Lys	Gly	Glu	Asn 170	Gly	Tyr	Gly	Phe	His 175	Leu
Asn	Ala	Ile	Arg 180	Gly	Leu	Pro	Gly	Ser 185	Phe	Ile	Lys	Glu	Val 190	Gln	Lys
Gly	Gly	Pro 195	Ala	Asp	Leu	Ala	Gly 200	Leu	Glu	Asp	Glu	Asp 205	Val	Ile	Ile
Glu	Val 210	Asn	Gly	Val	Asn	Val 215	Leu	Asp	Glu	Pro	Tyr 220	Glu	Lys	Val	Val
Asp 225	Arg	Ile	Gln	Ser	Ser 230	Gly	Lys	Asn	Val	Thr 235	Leu	Leu	Val	Cys	Gly 240
Lys	Lys	Ala	Tyr	Asp 245	Tyr	Phe	Gln	Ala	Lys 250	Lys	Ile	Pro	Ile	Val 255	Pro
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_	_							_	_						

Gln His Val Gln Thr Gly Ser Phe Phe Ser Ile Ser Leu Leu Ser Lys 20 Thr Ala Gln Trp Leu Cys Gln Gly Gly Ser Ser Ser Tyr Ser 40 This Phe Ser Gly Ser Leu Lys Ser Thr Arg Tyr Tyr Arg Gly Ser Arg 50

Ser 65

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Phe	Leu	Ser 35	Glu	Gly	Arg	Leu	Arg 40	Thr	Glu	Arg	Ser	Asn 45	His	Gln	Gly
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Leu	Val	Leu 35	Leu	Leu	Val	Ala	Gly 40	Ala	Leu	Thr	Ala	Leu 45	Leu	Pro	Ser
Val	Lys 50	Glu	Asp	Lys	Met	Leu 55	Met	Leu	Arg	Arg	Glu 60	Ile	Lys	Ser	Gln
Gly 65	Lys	Ser	Thr	Met	Asp 70	Ser	Phe	Thr	Leu	Ile 75	Met	Gln	Thr	Tyr	Asn 80
Arg	Thr	Asp	Leu	Leu 85	Leu	Lys	Leu	Leu	Asn 90	His	Tyr	Glņ	Ala	Val 95	Pro
Asn	Leu	His	Lys 100	Val	Ile	Val	Val	Trp 105	Asn	Asn	Ile	Gly	Glu 110	Lys	Ala
Pro	Asp	Glu 115	Leu	Trp	Asn	Ser	Leu 120	Gly	Pro	His	Pro	Ile 125	Pro	Val	Ile
Phe	Lys 130	Gln	Gln	Thr	Ala	Asn 135	Arg	Met	Arg	Asn	Arg 140	Leu	Gln	Val	Phe
Pro 145	Glu	Leu	Glu	Thr	Asn 150	Ala	Val	Leu	Met	Val 155	Asp	Asp	Asp	Thr	Leu 160
Ile	Ser	Thr	Pro	Asp 165	Leu	Val	Phe	Ala	Phe 170	Ser	Val	Trp	Gln	Gln 175	Phe
Pro	Asp	Gln	Ile 180	Val	Gly	Phe	Val	Pro 185	Arg	Lys	His	Val	Ser 190	Thr	Ser
Ser	Gly	Ile 195	Tyr	Ser	Tyr	Gly	Ser 200	Phe	Glu	Met	Gln	Ala 205	Pro	Gly	Ser
Gly	Asn 210	Gly	Asp	Gln	Tyr	Ser 215	Met	Val	Leu	Ile	Gly 220	Ala	Ser	Phe	Phe
Asn 225	Ser	Lys	Tyr	Leu	Glu 230	Leu	Phe	Gln	Arg	Gln 235	Pro	Ala	Ala	Val	His 240

Ala	Leu	Ile	Asp	Asp 245	Thr	Gln	Asn	Cys	Asp 250	Asp	Ile	Ala	Met	Asn 255	Phe .
Ile	Ile	Ala	Lys 260	His	Ile	Gly	Lys	Thr 265	Ser	Gly	Ile	Phe	Val 270	Lys	Pro
Val	Asn	Met 275	Asp	Asn	Leu	Glu	Lys 280	Glu	Thr	Asn	Ser	Gly 285	Tyr	Ser	Gly
Met	Trp 290	His	Arg	Ala	Glu	His 295	Ala	Leu	Gln	Arg	Ser 300	Tyr	Cys	Ile	Asn
Lys 305	Leu	Val	Asn	Ile	Tyr 310	Asp	Ser	Met	Pro	Leu 315	Arg	Tyr	Ser	Asn	Ile 320
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Asn	Leu	Lys 35	Thr	Ala	Trp	His	Leu 40	Ser	Ser	Phe	Ser	Met 45	Leu	Cys	Ile
Phe	Leu 50	Ser	Asn	Ile	Met	Asn 55	Phe	Ile	Tyr	Ser	Arg 60	Ser	Leu	Tyr	Asn
Arg 65	Lys	Lys	Ser	Ala	Val 70	Leu	Leu	Gly	Tyr	Lys 75	Ile	His	Ile	Thr	Phe 80
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Arg	Val	Lys	Glu 20	Ser	Met	Val	Asp	Leu 25	Pro	Trp	Asp	Phe	Ile 30	Ser	Leu
Arg	Asn	Met 35	Ser	Ile	Leu	Ser	Ser 40	Leu	Thr	Leu	Gly	Ser 45	Lys	Ala	Val

Lys Ala Pro Ala Thr Ser Asn Asn Thr Arg Met Thr Thr Lys Asp Asn

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Phe	Ile	Phe 35	Ile	His	Val	Val	Val 40	Ile	Phe	Ser	Ser	Gln 45	Phe	Leu	Leu
Val	Ser 50	Pro	Phe	Pro	Gly	Ser 55	Phe	Leu	Leu	Leu	Leu 60	Leu	Ser	Val	Gly
Asp 65	Asp	Lys	Leụ	Val	Ser 70	Leu	Arg	Ala	Leu	His 75	Leu	Trp	Ile	Phe	Leu 80
Xxx	Ser	Leu	Thr	Gly 85	Gln	Pro	Ala	Pro	Val 90	Gly	Ser	Gly	Pro	Val 95	Leu
Arg	Leu	Pro	Arg 100	Ser	Leu	Phe	His	Leu 105	Gln	Val	Cys	Leu	Pro 110	Xxx	Pro
Ala	Pro	Gly 115	Leu	Ala	Pro	Ala	Ala 120	Ala	Cys	Pro	Ser	Glu 125	Ala	Leu	Leu
Ser	Pro 130	Pro	Gly	Ser	His	Gly 135	Trp	Phe	Pro	Leu	Ser 140	Gln	Leu	Val	Ser
Leu 145	Asn	Pro	Lys	Pro	Leu 150	Arg	Asn	Trp	Gly	Leu 155	Val	Ser	Gly	Thr	Cys 160
Cys	Tyr	Gln													
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Glu	His	Leu	Trp 20	Xxx	Phe	Ile	Tyr	Phe 25	Ala	Xxx	Val	Cys	Gly 30	Gln	Ser
Asn	Ile	Phe 35	Pro	Lys	Tyr	Ile	Leu 40	Pro	Arg	Lys	Xxx	Lys 45	Lys	Gln	Ile

Arg	Xxx 50	Phe	Asp	Xxx	Lys	Xxx 55	Asn	Arg	Pro	Xxx	Lys .60	Gly	Ala	Xxx	Thr	
Trp 65	Ser	Arg	Ala	Trp	Xxx 70	Arg	Gly	Lys	Ala	Xxx 75	Arg	Gly	Gln	Val	Cys 80	
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Ser	Xxx	Ile	Asp 100	Val	Xxx	Arg	Ile	Tyr 105	Thr	Val	Xxx	Arg	Asn 110	Xxx	Arg	
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Xxx	Xxx 130	Tyr	Thr	Phe	Ser	Leu 135	Trp	Xxx	Asn	Xxx	Leu 140	Thr	Lys	Leu	Xxx	
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Leu	Lys	Xxx 35	Val	Pro	Xxx	Ile	Ser 40	Xxx	His	Cys	Ile	Tyr 45	Pro	Xxx	Asp	
Ile	Asn 50	Xxx	Thr	Leu	Phe	Ser 55	Phe	Tyr	Ser	Ser	Asn 60	Lys	Val	Gly	Thr	
Asp 65	Leu	Ser	Thr	Thr	Asn 70	Leu	Pro	Ser	Xxx	Cys 75	Leu	Ala	Ser	Xxx	Pro 80	
Cys	Ser	Ala	Pro	Gly 85	Xxx	Xxx	Pro	Leu	Xxx 90	Xxx	Pro	Val	Xxx	Phe 95	Xxx	
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Pro	Leu	Ser	Cys 20	Gly	Ser	Leu	Ala	Cys 25	Met	Ala	Tyr	Thr	Gly 30		Leu	
Gly	Leu	Trp	Ala	Val	Gln	Thr	Gln	Gly	Ser	His	Phe	Ala	Phe	Pro	Leu	

35 40 45 Ala Leu Ser Phe Ser Ile Leu Leu Arg Gln Asn Phe Ser Gln Arg 50 60 Arg Thr Leu Cys Cys Pro Arg Ser Ala Val Ile Leu Pro Phe Leu Pro 65 70 75 Ser Phe His Pro Ser Ser Ala Gln Lys Ser Met Ser Arg Asn Ser 85 90 Phe Leu Pro Leu Trp Asp Ser Glu Thr Gly Asn Leu Gln Gly Val 100 105 Phe Pro Ser Pro Leu Phe Leu Phe Ser Thr Pro Arg Gly Thr Lys Ala 115 120 125 Ala Val Pro Thr Ser Gly Thr Glu Leu Ile His Thr Val Gly Lys Leu 130 135 140 Gln Gly Pro Leu Leu Leu Val Leu Arq Ala His Leu Cys Trp Tyr Ser 145 150 155 160 Phe Gln Lys Arg Lys Met Ile Glu Pro Arg Val Ala Pro Glu Cys 165 170 175 Thr Ser Ser Leu Val Glu Gly Pro Lys Leu Val Phe Arg Ala His 180 185 190 Glu Ile Arg Cys His Ala Phe Cys Arq Arq Val 195 200 <210> 607 <211> 154 <212> PRT <213> homo sapiens <400> 607 Glu Val Arg Gln Lys Glu Trp Cys Leu Leu Trp Ser Phe Pro Phe Pro 15 Gly Ala Gly Leu Cys Ala Lys Leu Gly Pro Gln Trp His Ile Ser Thr 20 25 30 Leu Leu Val Gly Ala Arg Pro Glu His Leu Thr Val Gln Pro His Thr 35 40 45 Ala Pro Arq Val Pro Pro Leu Ser Gln Ala Gly Pro Thr Ala Pro Gly 50 55 60 Gly Ser Ala Asp Lys Met Ala Pro Arg Cys Leu Cys Gln Asn Ser Ile 65 70 75 80 Gln Ala Val Lys Pro Pro Gln Val Asp Val Pro Gly Ala Gly Glu Glu 85 90 Ser Gly Thr Thr Thr Leu Ala Val Asn Leu Ser Gly Asn Arg Leu 100 105 110 Phe Leu Val Ala Ala Ser Cys Pro Gly Leu Glu Val His Arg Ser Arg 115 120 125

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Gly	Leu	Arg	Ile 20	Arg	Ile	Val	Gly	Arg 25	Glu	Lys	Leu	Leu	Leu 30	Glu	Asp
Phe	Leu	Ser 35	Gln	Ser	Pro	Arg	Glu 40	Val	Glu	Arg	Arg	Asn 45	Phe	Cys	Trp
Thr	Ser 50	Ser	Gly	Gln	Arg	Lys 55	Asp	Gly	Met	Lys	Val 60	Glu	. Lys	Ala	Glu
Leu 65	Gln	Leu	Ser	Gly	Asp 70	Asn	Lys	Glu	Phe	Phe 75	Ser	Gly	Lys	Ser	Phe 80
Val	Leu	Glu	Gln	Gly 85	Trp	Lys	Met	Gly	Thr 90	Thr	Lys	Glu	Lys	Gln 95	Ser
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Arg	Gln	Asn	Lys 20	Glu	Ser	His	Ser	Lys 25	Met	Phe	Ile	Val	Asp 30	Asn	Met
Ser	Leu	Lys 35	Val	Val	Pro	Leu	Cys 40	Ser	Tyr	Ser	Thr	Glu 45	Glu	Met	Ile
His	Ile 50	Pro	Ile	Ile	Asp	Met 55	Val	Ser	Gln	Ser	Glu 60	Glu	Ser	Phe	Arg
Arg 65	Leu	His	Lys	Tyr	Val 70	Leu	Cys	Thr	Cys	Pro 75	Met	Leu	Gly	Asn	Arg 80
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Lys	Asn	Tyr	Ala 20	Asp	Asn	Tyr	Arg	Lys 25	Ile	Asn	Pro	Asn	Leu 30	Val	Lys
Leu	Val	Lys 35	Ala	Cys	Thr	Phe	Gln 40	Arg	Phe	Ile	Arg	Thr 45	Gly	Leu	Asn
Arg	Glu 50	Phe	Leu	Leu	Asn	Lys 55	Met	Ala	Leu	Thr	Leu 60	Val	Pro	Arg	Asn
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Pro	Thr	Leu 35	Thr	Pro	Ala	Val	Pro 40	Pro	Tyr	Val	Lys	Leu 45	Gly	Leu	Thr
Val	Val 50	Tyr	Thr	Val	Phe	Tyr 55	Ala	Leu	Leu	Phe	Val 60	Phe	Ile	Tyr	Val
Gln	Leu	Trp	Leu	Val	Leu	Arg	Tyr	Arg	His	Lys	Arg	Leu	Ser	Tyr	Gln

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Leu	Phe	Ser	Phe 100	Tyr	Phe	Lys	Asp	Phe 105	Val	Ala	Ala	Asn	Ser 110	Leu	Ser
Pro	Phe	Val 115	Phe	Trp	Leu	Leu	Tyr 120	Cys	Phe	Pro	Val	Cys 125	Leu	Gln	Phe
Phe	Thr 130	Leu	Thr	Leu	Met	Asn 135	Leu	Tyr	Phe	Thr	Gln 140	Val	Ile	Phe	Lys
Ala 145	Lys	Ser	Lys	Tyr	Ser 150	Pro	Glu	Leu	Leu	Lys 155	Tyr	Arg	Leu	Pro	Leu 160
Tyr	Leu	Ala	Ser	Leu 165	Phe	Ile	Ser	Leu	Val 170	Phe	Leu	Leu	Val	Asn 175	Leu
Thr	Cys	Ala	Val 180	Leu	Val	Lys	Thr	Gly 185	Asn	Trp	Glu	Arg	Lys 190	Val	Ile
Val	Ser	Val 195	Arg	Val	Ala	Ile	Asn 200	Asp	Thr	Leu	Phe	Val 205	Leu	Cys	Ala
Val	Ser 210	Leu	Ser	Ile	Cys	Leu 215	Tyr	Lys	Ile	Ser	Lys 220	Met	Ser	Leu	Ala
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Ile	Gly	Val	Thr	Val 245	Ile	Leu	Leu	Tyr	Thr 250	Ser	Arg	Ala	Cys	Tyr 255	Asn
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Tyr	Asp	Trp 275	Tyr	Asn	Val	Ser	Asp 280	Gln	Ala	Asp	Leu	Lys 285	Asn	Gln	Leu
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Thr	Lys	Asp	Leu	Thr 325	Asn	Pro	Gly	Met	Val 330	Pro	Ser	His	Gly	Phe 335	Ser
Pro	Arg	Ser	Tyr 340	Phe	Phe	Asp	Asn	Pro 345	Arg	Arg	Tyr	Asp	Ser 350	Asp	Asp
Asp	Leu	Ala 355	Trp	Asn	Ile	Ala	Pro 360	Gln	Gly	Leu	Gln	Gly 365	Gly	Phe	Ala
Pro	Asp 370	Tyr	Tyr	Asp	Trp	Gly 375	Gln	Gln	Thr	Asn	Ser 380	Phe	Leu	Ala	Gln
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Gly	Asp	Pro 35	Ala	Val	Gly	Pro	Ser 40	Pro	Gln	Arg	Leu	Ala 45	Ala	Ala	His
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Arg	Leu 130	Leu	Ala	Ala	Leu	Leu 135	Leu	Pro	Cys	Val	Pro 140	Ala	Val	Phe	His
Pro 145	His	Ala	Asp	Glu	Leu 150	Val	Leu	His	Ala	Gly 155	Asp	Phe	Gln	Ser	Gln 160
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Gly	Leu	Pro	Leu 180	His	Gln	Pro	Cys	Phe 185	Pro	Val	Gly	Glu	Phe 190	Asn	Leu
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Glu	Gly	Ala 35	Glu	Arg	Ile	Gly	Arg 40	His	Glu	Val	Phe	Glu 45	Val	Glu	Gly

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Asp 65	Ala	Leu	Val	Ala	Glu 70	Pro	Leu	Val	Ala	Val 75	Thr	Gln	His	Gln	Pro 80
Glu	Leu	His	Val	Asp 85	Glu	His	Glu	Glu	Gln 90	Arg	Val	Glu	His	Gly 95	Val
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Arg	Gly	Arg 115	Gln	Arg	Val	Val	Ala 120	Gly	Trp	Val	Pro	Arg 125	Arg	Gly	Leu
His	Arg 130	Ala	Gly	Gly	Ala	Ala 135	Ala	Arg	Pro	Gly	Thr 140	Leu	Gly	Pro	His
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Thr	Gln	Leu 35	Lys	Gly	Arg	Gln	Val 40	Gly	Trp	Glu	Arg	Lys 45	Leu	Leu	Ser
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Pro	Gly	Arg 195	Ala	Ser	Pro	Ser	Trp 200	Trp	Ile	Phe	Phe	Phe 205	Phe	Phe	Thr
Phe	Pro 210	Leu	Cys	Ser	Leu	Gly 215	Leu	Phe	Arg	Leu	Pro 220	Phe	Leu	Xxx	Pro
Arg 225		Pro	Val	Pro	His 230	Pro	Ser	Ser	Pro	Leu 235	Xxx	Gln	Val	Ser	Pro 240
Thr	Ser	Leu	Ala	Ser 245	Leu	Ala	Ser	Gln	Asn 250	Gln	Gly	Ser	Trp	Thr 255	Glu
Lys	Ala	Xxx	Gly 260	Val	Leu	Gly	Pro	Pro 265	Phe	Phe	Pro	Ser	Cys 270	Xxx	Phe
Leu	Ser	Phe 275	Leu	Pro	Thr	Leu	Val 280	Ser	Ser	Ser	Pro	Cys 285	Leu	Xxx	Val
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Cys	Phe	Leu	Arg	Leu 325	Gly	Asp	Phe	Ser	Val 330	Arg	Leu	Ala	Gly	Ser 335	Val
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Glu His Asn Gly Lys Val Lys Lys Lys Lys Lys Ile His Gln Glu Gly

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Gly	Leu	Gly	Val	Ala 85	Trp	Glu	Gly	Ile	Ser 90	Leu	Leu	Val	Asp	Phe 95	Phe
Phe	Leu	Leu	His 100	Leu	Pro	Ile	Val	Phe 105	Ser	Gly	Ala	Leu	Pro 110	Xxx	Ser
Val	Ser	Xxx 115	Pro	Lys	Ala	Ala	Cys 120		Ser	Ser	Phe	Phe 125	Pro	Thr	Xxx
Ala	Ser 130	Val	Pro	Asn	Ile	Pro 135	Gly	Leu	Pro	Gly	Leu 140	Thr	Glu	Pro	Arg
Val 145	Leu	Asp	Arg	Glu	Gly 150	Xxx	Trp	Gly	Pro	Gly 155	Xxx	Pro	Phe	Phe	Ser 160
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Phe	Leu	Thr 275	Asp	Thr	Phe	Thr	Ala 280	Tyr	Tyr	Arg	Leu	Leu 285	Ile	Thr	His
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Lys	Gly	Pro 355	Val	Gln	Pro	Ala	Gly 360	Gly	Gln	Lys	Gly	Pro 365	Ser	Gly	Pro
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Ser	Phe	Cys 115	Arg	Arg	His	Pro	Gly 120	Leu	Gly	Lys	Ala	Phe 125	Pro	Ser	Gly
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Phe 1	630 Met Glu	Ile	Asn Glu	5	Gly	Cys	Asp	Gly 25	10	Lys	Ala		Lys	15	Ser
Phe 1 Lys	630 Met Glu	Ile Glu Pro	Asn Glu 20 Gln	5 Met	Gly Pro	Cys	Asp Pro 40	Gly 25	10 Ser Leu	Lys	Ala Leu	Gly Ser 45	Lys 30	15 Val	Ser
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Phe 1 Lys His Lys Pro 65	630 Met Glu Gly Lys 50 Tyr	Ile Glu Pro 35 Lys Gln	Asn Glu 20 Gln Lys Arg	5 Met Thr Lys Glu Leu	Gly Pro Glu Met 70 Pro	Cys Phe Thr 55	Asp Pro 40 Phe	Gly 25 Pro Ile Glu	10 Ser Leu Met Leu Ala 90	Lys Ser Asn Lys 75	Ala Leu Gln 60 Lys Gln	Gly Ser 45 Gln Pro	Lys 30. Pro Gly	Val Leu Phe Phe	Ser Pro Ser Val 80
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Val 145	Ile	Tyr	Tyr	Asn	Leu 150	Asn	Leu	Gly	Ile	Ser 155	Phe	Gly	Leu	Pro	Gln · 160
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Glu	Leu 50	Lys	Lys	Pro	Pro	Phe 55	Val	Pro	Asn	Ser	Thr 60	Leu	Pro	Ile	Phe
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Ser	Ser	Phe	Pro 20	Leu	Pro	Ala	Ala	Lys ·25	Lys	Lys	Lys	Lys	Gly 30	Asn	Val
Tyr	His	Glu 35	Ser	Thr	Gly	Phe	Gln 40	Ser	Leu	Ser	Lys	Arg 45	Asp	Val	Glu
Arg	Ala 50	Lys	Glu	Thr	Thr	Leu 55	Cys	Ser	Gln	Leu	His 60	Phe	Thr	His	Ile

Leu 65	. Cys	Asn	Thr	Asn	Thr 70	Val	Leu	Leu	Gly	Pro 75	Phe	Leu	Thr	Asp	Gly 80 ·
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Ile	Leu	Ser	Ser 20	Gln	Phe	Cys	Cys	Gln 25	Ala	Thr	Val	Val	Trp 30	Arg	Leu
Val	Gly	Cys 35	Cys	Pro	Cys	Cys	Asn 40	Glu	Trp	Glu	Glu	Val 45	Asp	Ser	Gly
Met	Val 50	Glu	Thr	Phe	Thr	Ser 55	Ser	Ser	Pro	Ala	Thr 60	Gly	Ile	Pro	Pro
Arg 65	Pro	Val	Leu	Cys	Cys 70	Gly	Gly	Arg	Phe	Lys 75	Ser	Lys	Lys	Leu	Leu 80
Phe	Glu	Val	Gly	Phe 85	Ala	Val	Trp	Phe	Lys 90	Xxx	His	Asp	Ala	Ile 95	Ala
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His	Leu	Phe	Arg 20	Thr	Pro	Leu	His	Thr 25	Leu	Gln	Pro	Pro	Lys 30	Val	Pro .
Gly	Ser	Gly 35	Phe	Leu	His	Pro	Ala 40	Ala	Ala	Thr	Asn	Ala 45	Asn	Ser	Leu
Asn	Ser 50	Thr	Phe	Ser	Val	Leu 55	Pro	Gln	Arg	Phe	Pro 60	Gln	Phe	Gln	Gln
His 65	Arg	Ala	Val	Tyr	Asn 70	Ser	Phe	Ser	Phe	Pro 75	Gly	Gln	Ala	Ala	Arg 80
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Ser	Xxx	Ala	Ile 20	Ala	Ser	Cys	Xxx	Leu 25	Asn	His	Thr	Ala	Asn 30		Thr
Ser	Asn	Ser 35	Asn	Phe	Leu	Asp	Leu 40	Asn	Leu	Pro	Pro	Gln 45	His	Asn	Thr
Gly	Leu 50	Gly	Gly	Ile	Pro	Val 55	Ala	Gly	Glu	Glu	Glu 60	Val	Lys	Val	Ser
Thr 65	Met	Pro	Leu	Ser	Thr 70	Ser	Ser	His	Ser	Leu 75	Gln	Gln	Gly	Gln	Gln 80
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